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CULTIVATOR,

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AND TO

DOMESTIC AND RURAL ECONOMY.

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FARM HOUSES AND FARM BUILDINGS

IMPROVED BREEDS OF

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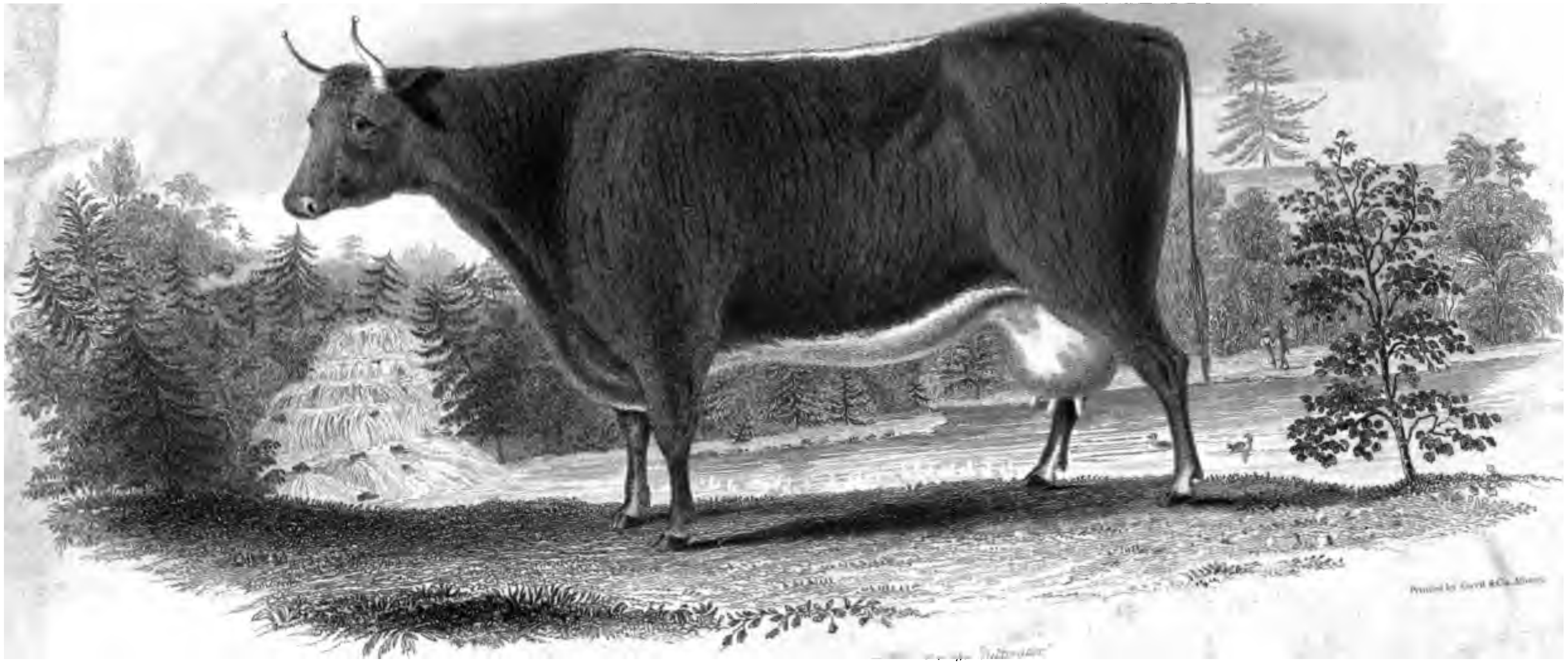

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MILCH COWS.

……

WITH A PORTRAIT OF MR. DONALDSON'S PRIZE COW.

……

We herewith present our readers with a fine steel portrait of the native cow "Kaatskill," belonging to R. Donaldson, Esq., Blithewood, Dutchess county. The plate, which was executed expressly for the Cultivator, exhibits in the background, some of the beautiful scenery for which Blithewood is distinguished. It is a view of part of a fine stream which winds romantically through the northern portion of the grounds, and forms, in the space of half a mile, several charming cascades, one of which has a perpendicular fall of upwards of sixty feet. In Mr. Downing's Landscape Gardening and Rural Architecture, there are representations of other views belonging to the same locality. (See pages 308, 336.) In our August number of last volume, accompanying the portrait of Mr. Donaldson's bull Prince Albert, we gave a more extended notice of this place and its numerous interesting associations.

"Kaatskill" received the first prize of the New-York State Agricultural Society as the best *Dairy* cow exhibited at Poughkeepsie, in 1844. We are unable to refer to the original statement furnished the society by Mr. Donaldson in regard to the produce of this cow, but can say that satisfactory evidence was given that she had yielded, when kept on grass only, 38¼ quarts of milk per day, and that from the milk given by her in two days, 6½ pounds of butter were made, being at the rate of 22¾ pounds per week. Her appearance fully corresponds with the account of her produce. It is proper to state that while her milk was measured for the purpose of accurately ascertaining the quantity, she was milked four times every twenty-four hours.

It is a matter of regret that in breeding stock, so little attention is paid to the improvement of the milch cow. Almost every farmer may have noticed some of his herd that yield a much larger proportion of butter than others. It is not unfrequent that the difference in the amount of produce between the best and poorest of a lot of only eight or ten cows, amounts to one half, or more; and this too, without any perceptible difference in the quantity of food they eat. It is true that in the common mode of keeping stock, the relative amount of food consumed by the different animals is not accurately known; but there can be no reasonable doubt that the variation in their actual profit, is as great as we have stated.

We are aware that some have objected to the practicability of improving the breed of dairy stock—that "milking qualities are a matter of chance"—that though "you can *breed* fatting stock, you cannot *breed* a good milch cow;" but we think these conclusions have been adopted without due regard to the grand law of the animal and vegetable kingdoms, "like produces like." We cannot discover any natural barrier or obstacle to improvement in this case any more than exists in reference to breeding animals for any other purpose. Whenever the object of improving dairy stock has been undertaken, and judiciously and perseveringly carried on, we think a success correspondent to similar attempts for the improvement of other descriptions of stock, has been realized. But it is a fact that but little systematic effort has been made in this country in reference to this object—at this time there are but few breeders within our knowledge who regard dairy qualities as of *primary* importance; and we fully believe that a skillful breeder of dairy-stock who would engage earnestly in the business, and prosecute it with energy and judgment, would confer important benefits on the community, and would ultimately receive abundant pecuniary recompense.

……

POINTS OF A GOOD DAIRY COW.

It is admitted that cows are sometimes met with which give large yields of milk and butter, that have few or none of the points usually considered indicative of excellence. Some farmers, indeed, seem to consider beauty or symmetry wholly incompatible with good milking qualities, and, judging from their own herds, believe that the more ugly and uncouth the shape and appearance of their cows, the better they are.

Although in this case the breeder should regard dairy qualities as of the first importance, he should by no means be satisfied with these. His cows may give a large quantity of milk under circumstances which particularly favor them, and yet lack some of the essential requisites of profitable stock—such as constitution, and an ability to sustain themselves under disadvantages of food and climate. A weak constitutioned cow, when highly fed and well protected, frequently gives much milk, though it is apt to be deficient in richness; and notwithstanding she requires more and better food, and more care in sheltering, &c., than a hardy one, she will not last long, but will fail at an early age. Her weakness also exposes her more to the attacks of various diseases, which, as she has not the energy to resist them, are likely to prove fatal. Thus, excepting for use in the dairy for a short time, she is nearly worthless. Her progeny usually inherit her feebleness, requiring, if reared, very careful nursing, and in the end seldom prove profitable. Hence the breeder of dairy stock should endeavor to unite in his animals all the qualities on which their aggregate value depends.

The points of a perfect milch cow are—the head small; the muzzle fine; the face rather dished; and the space between the eyes wide. A *wedge-shaped* head should be avoided, as indicating weakness of constitution. The eye should be large, full, bright, and expressive of mildness and intelligence; the horns slender and of a waxy appearance; the ears thin; the neck small at its junction with the head, rather thin than fleshy, but pretty deep and full where it joins the body. The breast need not be so wide as in cattle designed chiefly for fattening, but it should not be too narrow; the portion of the chest beneath the shoulders deep; the shoulders not coarse and projecting, but well laid in at the top; the back straight; the loin and hips wide; the rump long and the pelvis wide. The ribs not quite so round as is preferred for grazing stock, but still giving to the carcass a barrel-like form. The flanks should be deep and full; the hind quarters long, and heavy in proportion to the fore ones; the twist wide; the thighs thin; the tail slender, excepting at its upper end, where it should be large; it should not rise much above the level of the rump; the legs rather short, and small and flat below the knee and hock. The skin should be of middling thickness, mellow, and elastic, and of a yellowish color as indicative of richness of milk; the hair thickly set and soft. The udder should be capacious, spreading wide on the body, but not hanging low, without fleshiness, but having plenty of loose skin; the teats of medium size, regularly tapering from the upper end, widely separated from each other, and placed well on the forward part of the bag. The milk-veins large, springing out near the fore legs, and appearing well developed to their junction with the udder.

The points relative to the skin, udder, &c., though mentioned last, we consider most indicative of good milking qualities.

Some of the best cows for the production of butter, have been known to possess nearly all the above characteristics—they therefore approached nearly to perfection, for while they had all the requisites of dairy cows, they possessed those also which fitted them for other purposes and greatly enhanced their value. Their progeny if females, were such as were wanted for cows—if males, and by a bull of the right kind, they made the most valuable stock for work or fattening.

There is not only a great difference in the amount of cream and butter afforded by a given quantity of milk from different cows, but the *quality* of the butter produced by the same process, is likewise very different. It is well known that butter of the best quality cannot be made from some cows, whatever may be the quantity they yield. In our experience, we have generally found this to be the case with cows giving a large quantity of thin milk. We have also noticed that coarse-boned, hard-skinned, unthrifty cows, generally afford the poorest milk and the poorest butter.

It has been laid down as a rule that cattle which fatten readily, usually give richer milk than those of an opposite character. A reference to some breeds we think supports this conclusion. The old Short Horns for instance, gave poor milk, and they were very lean and unthrifty. The improved breed, on the other hand, fatten easily, and though they give less milk than the old stock, it is of better quality. The Kyloes and Galloways, breeds which are much disposed to fatten, give milk of remarkable richness. Now, although we would by no means encourage an *excessive* fattening tendency in dairy stock, we believe that for the purpose of obtaining rich milk and good butter, the fattening properties should not be disregarded. In connection, therefore, with the points which indicate a disposition to secrete milk, we would unite those denoting constitution and a *moderate* tendency to make fat, in order to constitute an animal whose produce should be superior in quality as well as quantity, and which should combine the requisites that would increase to the greatest extent her ultimate profit and value.

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REMARKABLY PRODUCTIVE COWS.

A notice of some of the most remarkable cows of which accounts have been made public, may be read with interest, as it serves to show what is attainable in this respect.

The most extraordinary cow of which we have any record, is one which was owned by William Cramp, of Lewes, Sussex, England, concerning which the Board of Agriculture collected the following facts:

She was of the Sussex breed, and was calved in 1799. From May 1, 1805, to April 2, 1806, forty-eight weeks and one day, her milk produced 540 lbs. of butter. The next year, or from April 19, the day she calved, to Feb. 27, 1807, forty-five weeks, she produced 450 lbs. of butter. It is stated that she was sick this year, and under the care of a farrier three weeks after calving. The third year, from April 6, 1807, the time she calved, to April 4, 1808, fifty-one weeks and four days, she produced 675 lbs. of butter. The fourth year from April 22, 1808, the day she calved, to Feb. 13, 1809, forty-two weeks and three days, she produced 466 lbs. butter. The fifth year, from April 3, 1809, to May 8, 1810, fifty-seven weeks, she produced 594 lbs. butter. The greatest quantity of butter mentioned as having been produced by this cow in any one week, was 18 lbs., and the greatest quantity of milk mentioned as having been given in any one day, was 20 quarts. She was well fed at all times. "In summer she was fed on clover, lucerne, rye-grass, and carrots, three or four times a day, and at noon about four gallons of grains and two of bran, mixed together. In winter she was fed with hay, grain, and bran, mixed as before stated, feeding often."

The next most remarkable in the catalogue, is the celebrated Oaks or "Danvers prize cow." The first notice we find of her, is in a communication from E. Hersy Derby, Esq., to the Massachusetts Agricultural Repository and Journal, dated Dec. 25, 1816. From this it appears that in 1813, Caleb Oaks, of Danvers, Mass., bought this cow "of his brother-in-law," by whom she had been purchased out of a drove. She was then five years old. Mr. Oaks made from her the first year, 180 lbs. of butter; the next year, 1814, she made 300 lbs.; in 1815, over 400 lbs., and in 1816, 484¼ lbs. In the latter year she took the first premium at the Massachusetts state show, at Brighton. The greatest quantity of butter made by her in one week, was 19¼ lbs.; the greatest quantity of milk given per day, was 16 to 18 quarts. She was fed, in addition to ordinary pasture feed, with one bushel of Indian meal per week, and allowed to drink all her skimmed milk. After the above trials, she was purchased by the Hon. Josiah Quincy; her yield in butter, however, never came up to what it had before been, though she sometimes made 16 lbs. per week, and her milk was of such richness that five quarts of it frequently yielded a pound of butter.

Mr. Colman states that he found in Ireland, a dairy of fine cows of the Kerry breed, (a small race,) which averaged 320 lbs. of butter to each for the season.

The milk given by one of Col. Jaques' "cream-pot" cows in three days, afforded nine pounds of butter—or at the rate of twenty-one pounds per week—and another of the same family made nineteen pounds per week.

Six Durham cows belonging to George Vail, Troy, made in 30 days, (June, 1844,) 262 lbs. 7 oz. butter—being an average of 43 lbs. 12 oz. to each cow. The average quantity of milk per day for each cow, was 22½ quarts. The feed was grass only.

Mr. Colman, in his Fourth Report on the Agriculture of Massachusetts, gives a list of 66 "native" cows and their produce, from which we take the following:

The Nourse cow, owned in North Salem, made 20 lbs. of butter in one week, and averaged 14 lbs. of butter per week for four successive months.

A cow owned by Samuel D. Colt, of Pittsfield, from 1st December to 26th April, 148 days produced 193 lbs. of butter.

Four cows belonging to Jesse Putnam, Danvers, Mass., in 1830, averaged more than 208 lbs. of butter each in the season; highly fed.

A cow owned by S. Henshaw, Springfield, produced 17¾ lbs. of butter per week, and in one case, 21 lbs. of excellent butter. In 4¼ days, that is 4 days and one milking, she produced 14 lbs. 3 oz. of butter—at the rate of 22¼ lbs. per week.

NOTES OF TRAVEL IN IRELAND.....No. II.

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RURAL AND AGRICULTURAL.

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Deeply interested as we have been by the perusal of the second number of our correspondent's "Notes of Travel in Ireland," we find ourselves compelled to curtail them somewhat, in order to dispose of his letter in a single number of our paper. It is dated at Dublin, March, 1845, and opens with the following account of an

IRISH FARMER'S BREAKFAST.

L. **Tucker**, Esq.—If I recollect rightly, I closed my last letter to you as I entered the breakfast-room in Smithfield. Allow me now to lead you to the breakfast-table, and introduce you to its company. At the head of the table was seated the elegant and accomplished mistress of the house, the wife of one of the partners of the firm; and at the foot, presided two of her daughters, that in appearance and manner, would in my opinion have graced any situation in which chance or fortune could have placed them; I involuntarily thought to myself, what a valuable importation one of them would be to my country, as an American farmer's wife!

The table was laid for about twenty, which I understood was usually filled at least three times in succession every market morning. The ladies at either end, distributed black and green tea, and chocolate, at the choice of the persons they served, (but *coffee* was not on their catalogue); in the center were two very neat and ornamental metal stands, for boiling eggs, which were constantly kept replenished, and needed it too, from the numbers used; around was placed loaves of "light" bread, at least one day old, with nice French rolls, of the same age; and here and there, interspersed with coolers of the finest fresh butter, were neat silver racks filled with *cold* dry toast; this comprised the whole of the eatables and drinkables, on the breakfast table. Not an atom of meat nor a bite of hot bread was there to be seen; yet all eat heartily, and were the most healthy and ruddy looking set of men, both old and young, that I ever before saw congregated together. I must not forget to mention, though, that on a *side-table* was placed a huge sirloin of roast beef, a monster round of cold corned beef, and one of the finest cold corned beef tongues (*neat's* tongue as it is here called,) that I ever saw, which, with a large silver mustard pot well filled, a jug of fine sparkling old ale overflowing, and a few Irish potatoes baked in their jackets, formed the *reserve-table* for those gentlemen who had ridden some ten or twelve *Irish* miles before daylight into market; (recollect their miles, like their hearts, are larger than the English, the proportion being as eleven to fourteen;) and they were not a few, judging by the number that paid their respects to this last described table.

I was here most forcibly struck with the difference between those people and ourselves. Although all in the room were men of business and of the same pursuits, yet not one word was spoken on business; not *a dollar or a cent* escaped their lips. Each one seemed to vie with the other in the raciness and point of his joke, at the expense of his neighbor, in which the mother and daughters joined with all their hearts and souls; all was mirth and jollity, and all seemed to me as of one family, I being the only individual to whom "Mr." was applied, the others familiarly addressing each other by their given names, which made me for some time feel as "a stranger in a strange land." Business was reserved to be spoken of, and attended to, in its proper place, and in the absence of the ladies.

In the course of half an hour I was successively introduced to some 40 or 50 gentlemen, the elite of the graziers and farmers of Kildare, Meath and Dublin. You may judge the pleasure I derived from this, when I tell you that fully one-third of them were the acquaintances and cotemporaries of my father; *every one* gave me a pressing invitation to his home, conveyed in such language that I could not mistake it for meaning else than what it said. Many were the questions asked respecting my country. I discovered that every one had some near friend or relative in America. They astonished me however, by the little they knew of our country, its localities, or institutions. Though elegantly educated and well informed men otherwise, they were entirely ignorant on these points; yet I could say that the Irish hold America *second only* in their love and respect, to their own dear native soil.

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PHŒNIX PARK, DUBLIN.

Our correspondent left Dublin on a visit to Mr. **John Rorke**, at Finstown, about six miles from that city. Of what he says of the route thither, we can make room for the following only:

Quitting Barrack-street, we left the great western mail coach road, and entered the Phœnix Park, in which is the country residence of the Lord Lieutenant, through a beautiful entrance formed of two pairs of iron gates, so constructed that the carriages going out should not come in contact with the others coming in. On either side is a neat cottage, called here "Lodges," in which two of the Rangers or Game-Keepers of the Park reside with their families. We then got on high, but perfectly level ground, and passed for fully three miles across this Park, on a fine, smooth, and McAdamised road, having below us in the valley, a full view of the Liffey, the Old-Man's Hospital, Island Bridge, the extensive Artillery barracks adjoining, Kilmainham Prison, the beautifully arranged and capacious Portobello-barracks, with a partial peep at the Penitentiary in which O'Connell and his associates were confined. In the back ground, extending in width some six to eight miles, is a gently rising plain, green at all seasons as are our fields in May, thickly studded with country residences, chiefly of the gentry of the city, the grounds carefully planted with trees laid off in groups, giving the scene such an air of taste and finish, as renders it worthy of being crowned by the charmingly majestic Dublin and Wicklow mountains which rise immediately at its back, and terminate the visible horizon to the south, for the whole extent within view.

Besides the residence of the Lord Lieutenant, in this Park also are the private residences of the Secretary and Under-Secretary to the Government, and of other officials, which greatly tend to relieve the eye in looking over so extensive a domain, containing several thousand acres, reminding me involuntarily at the time, of one of our own great prairies in Illinois. It is well stocked with deer; here and there we passed several large herds of them bounding across our road, taking no more notice of us, or of the many other vehicles that passed, than so many cows would have done. The public have free access at all times to this Park, which is the most beautiful and most extensive that the inhabitants of any city in any country have for their recreation and amusement. It is the property of, and supported by the Government, and is kept in superb order.

At the extreme west end we left this Park through similar gates, and descended Knockmaroon hill, to what is called the "lower road," at the foot of which we suddenly came again on the Liffey, and continued along its banks four miles; here commences the far-famed Strawberry banks that supply Dublin with this delicious fruit. They extend rather more than two miles in length, rising from the road, steeply yet moderately sloping, some 600 or 800 feet to the level above. Along its basis are thatched cottages of the neatest kind and order, with bowers in front of each, where the citizens come of summer evenings, with their families, to eat fresh strawberries and cream, and to throw out their flies into the Liffey for either a trout or a salmon, with both of which fish it abounds, of the finest quality and largest size.

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AN IRISH FARM-YARD AND ITS APPURTENANCES.

Anxious to see some of what was to be seen in the farm-yard, I was out in the morning by 7 o'clock, but Mr. Rorke and his sons were there before me, and had finished their rounds by daylight. To describe his farm-yard is a task I undertake with pleasure, although I feel incompetent to do any thing like justice to it. It stands immediately in the rear of his house and shaded from view, though within a few steps, by a judiciously planted shrubbery of forest and evergreen trees. It is entirely closed in, together with the hay and grain-yards, all of which cover about four *Irish* acres of ground. There are two large gates of entrance, the one from the back part of the farm, the other from the front portion of it. At one end stands a large brick building, the mill house, where the oats and grain and other food for his stock is ground and crushed. Here is a turnep or general root slicer, and also a straw-cutter, together with the best and most complete thrashing machine I ever saw; when the grain is fed to it in front, you have no more trouble about it; it is thrashed, winnowed, the straw shaken and thrown out into a large straw-shed adjoining, where a man packs it away, and the clean grain is raised by elevators into the upper lofts and deposited there for safe keeping. The whole machinery is moved by water. In the rear of this building is the grain-stack-yard, so arranged that most of it can be thrown from the stack under a shed to within reach of the man that feeds the thrasher.

On two sides of the square, stand brick sheds with slated roofs, containing 350 milch cows, the milk of which is sent into Dublin twice a day, to three hospitals (one of them the "Foundling Hospital" that takes more than half of the whole,) which Mr. R. has supplied by contract for many years. Those cows are never let out, having a fresh supply of water constantly before them within reach, and are fed in the summer with fresh cut Italian Rye grass, (of which Mr. R. speaks in the most favorable terms,) with clover, vetches, and fresh cut common grass, alternately, and in their turn. In winter he feeds them with turneps, potatoes and mangel-wurtzel, all steamed, and also gives them some chopped straw and hay steamed, with the liquor it was steamed in, and some bruised oats and barley meal, and some linseed meal-cake occasionally mixed with it. You may judge from this management, the condition of the cows, and the quantity of milk they give. Those cows are curried and brushed once a day, and the whole of the passages washed out twice every day with water and a broom; the temperature is kept below 65 and over 60 during the winter. One man is allowed for every ten cows, to feed, milk, clean and attend to them, and there is no time that you cannot with comfort sit down in the sheds, so neatly are they kept. The feeding is done four times a day by clock work. A large clock is placed in the front of one of the buildings, within view from every part of the yard, and can be heard strike, of a mild day, at the most distant part of the farm.

Another square was occupied by sheds of a similar kind, and contained 200 heifers, four years old, that were fattening for the Dublin Smithfield market. Some of those were fit for market then, and we judged them to weigh on an average, seven hundred weight, or 784 lbs. each, the cwt. being 112 lbs., by which they compute their weights here I find. Those heifers were fed principally on hay and turneps, as much as they would eat three times a day, with an occasional change of a feed of potatoes and some linseed meal-cake as they approached being finished off. *No water* was given them, nor did they need it, which surprised me; they were well curried *twice* a day, and the passages cleaned and washed as the cow sheds; but each man had fifteen heifers to feed and attend to.

On another square, the mill house standing at one end, are the work horse stables and harness rooms, of equal finish, and as complete as the other buildings. In the center of this square, surrounded by a three foot wall, is a large space, hollowed out in the middle, for the dung, of which wagon loads are made every day. About the middle of each building is a large cistern to receive the urin of the animals, which is pumped out, and carted on to the land in carts precisely similar to those with which the streets in cities are watered.

In the center of each building is a feeding room, in the rear of which are root sheds, as well as extensive potato pits within the outer rick-yard wall; and in the rear of each square, is built an immense rick of hay, containing, as they estimated, some forty tons each, from which, with a hay knife, is cut off fresh each day the quantity for consumption on that day. In each shed is a *cattle-tube*, to be used in case that any of the stock should get choked by any of the roots on which they are feeding. It is a most useful instrument, quite elastic, and can be used without danger by any man, and gives immediate relief by pushing before it into the stomach, any obstruction that might have remained in the throat; no farmer, or at least neighborhood, should be without one of them. A watchman is up every night in the year, constantly going from shed to shed, to guard against fire, and to give relief to any animal that might require it during the night, as well as to call the men at 2 o'clock for milking.

The farm consists of 700 acres, the management of which I will give you some account of, together with a description of my first Irish fox-hunt with the Kildare hounds, in my next.

Till then, adieu, and believe me yours truly.

F. J. F.

CEMENT PIPES FOR CONVEYING WATER.

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WITH FIGURES OF IMPLEMENTS USED.

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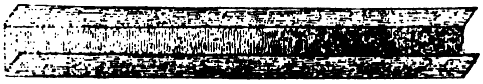
LUTHER TUCKER, Esq.—Having had experience in the construction and use of cement pipes for conveying water, I will venture to answer the inquiries of your correspondent, Mr. GUERNSEY. In doing so, you will permit me to write just as I should to a person who had never heard of cement pipes; that is, fully describe every part of the process, in the hope that my description will enable an ingenious man to make a perfect pipe.

The first thing is, to procure good lime. The best way is to use it direct from the stones as it is ground, before it can have imbibed any moisture. If this cannot be done, then it should be put into tight casks, and kept dry until it is to be used. The sand should be clean, and rather coarse. The proper proportions are one of lime to two of sand.

The ditch should be deep enough to render it certain that the pipe will be below frost: the bottom made true and about eighteen inches wide. A mold, (fig. 2) about five feet long, six inches wide, and three deep, made of smooth inch boards, the sides a little flaring, is necessary to carry the cement in after it is mixed.



Mold for Cement Pipes.—(*Fig.* 2.)

The lime and sand should be thoroughly mixed, before any water is put to them; then the water is to be applied to such portion as can be used before it sets, (perhaps two bushels;) and the cement sufficiently worked to wet every part of it, and tempered about like mortar used for plastering. It is then to be put into the mold, and made to just fill it even to the ends; which can be readily done by holding a small piece of board up against the ends, and with a trowel bringing the cement up to the board. Two men, standing in the ditch, receive this mold, thus filled with cement, and empty it on the middle of the bottom of the ditch. A rod (fig. 3) five and a half feet long, and one inch and a quarter in diameter, with a piece one foot long, of the same size, connected to it by a flexible leather pipe six inches long, (*a*.) to follow, is then laid on the cement, and pressed one-half of its diameter into it. Another mold full of cement is put exactly on the top, and pressed down on the rod, until the two bodies of cement come fully in contact on each side of the rod; the mold being taken off, each man with a trowel

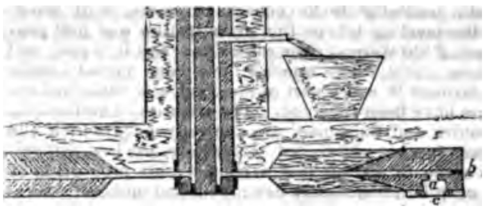
Rod for Cement Pipes.—(*Fig.* 3.)

points the sides and perfects the joint, one-half of the five feet. Fine earth is then to be thrown into the ditch, and trampled down by these men on each side of the cement, and about six inches of dirt thrown in loosely over the top. The end of the rod projects beyond the cement far enough for one man to take hold of it, and draw it, the other man placing himself so as to hold on to the sides of the cement to prevent a piece breaking off the end as the rod starts. In drawing the rod, be careful to first roll it a little, then start it endwise, and draw it to the leather, which being flexible, will allow the rod to be turned back over the finished part and rest it against the bank, while another mold of cement is placed on the bottom of the ditch. This new cement must be carefully joined to the old, which by this time will have become quite hard, with the point of the trowel; then turn the rod down on this new cement and, as before, press it into it, and put another mold on top, carefully joining it to the old cement—point it, throw in the dirt, and draw the rod. Any imperfection growing out of the leather part of the rod, will be corrected by the piece of wood that follows. The rod should be perfectly smooth and a little larger at the forward end than it is at the back end, that it may draw easily.

The proper way to attach the pipe to a penstock, is to put a lead pipe, of an inch and a half caliber, about three feet long over the rod, and cover one-half of its length with cement. A flange having been soldered on the end of the lead pipe, nail it to the penstock. If the water is to go down the same penstock, two holes must be bored through and connected with each other near the top, and both of them stopped at the bottom. A lead pipe just like the one described, on the other side of the penstock, will convey the water into the cement pipe, that is to carry it on. This plan of short lead pipes at the penstocks, is the only one known to me that will answer. The penstock may suffer quite a jar and not be put out of order, as the lead will bend. Cement pipes will not bend, but if they are moved they break. The frost is apt to lift penstocks, unless great care is taken to prevent it. The way is to put a frame of timber around the penstock and fill it with old tan-bark up to, and above the tube through which the water discharges. (See fig. 4.)

The proper way to introduce the water into the pipe at the spring, is to put a log some four or five feet long into the spring, with a hole bored through it, but fastened up at the end in the spring; and a hole made from the lower side, and a chamber (fig. 4, *a*.) some four inches square made in the lower side of the log, and a sieve (*c*.) to keep out leaves, &c. By this arrangement the sieve never becomes clogged, for the water will not run out of the spring until it is as high as (*b*.) The other end of this log is hewn off to a point, and the cement put all over and around it, through the wall of the spring, making all tight and preventing decay of the wood.

After the pipe is finished, it should remain slightly covered with earth, for some four or five weeks before the water is let in. The water being let in, careful examinations should be made along the whole length of the pipe, to see whether there is any leak. If there should be any discovered, a little cement will generally stop them; but sometimes, owing to the cement being improperly prepared, or drawing the rod too quickly, the top falls in for a few inches. In such a case, cut the top off the pipe and form a piece of tin of sufficient length, into the proper shape for the top of the tube, and cover it with cement to the same size it was originally. The tin will keep the cement in place until it sets, and that part of the pipe will be just as good as any other. But if care is taken in making the pipe, all this trouble can be avoided.



Connection of Penstock with the Pipe.—(Fig. 4.)

No experiments have been made that I know of, to test the strength of such a pipe. Last winter, a pipe on my premises, not as large, but of the same caliber, froze up at the point where it crossed a road. This stopped the water, and the pipe filled up to the top of a penstock; thus subjecting it to the pressure of twenty feet, perpendicular of water, and the pipe suffered no injury. My opinion is that, after the cement has be*come well set*, it would sustain a pressure at least equal to the atmosphere.

As to the cost of cement pipes, I can only say that lime commonly costs twelve and a half cents a bushel at the mill, and sand, three cents, delivered. Two men will lay twenty rods in a day, and two men will mix the cement, and deliver it on the bank of the ditch. A bushel and a half of lime is sufficient for a rod. This would make the cost, exclusive of the ditch, and transportation, about fifty cents a rod.

Whenever this pipe is strong enough to sustain the pressure, and a caliber of two inches is sufficient to convey the required amount of water, no other material can compare with it for cheapness or value when completed. No rust or decay is to be feared, and the water is just as pure as though it had been brought in a porcelain pitcher from the spring.

The only objection to the universal adoption of cement to convey water, in this country, is the difficulty of making pipes of large caliber, without using stone or brick to give them strength while the cement sets. But this objection is not so great but that it will ultimately go into general use, for a large pipe can be made of hard brick and cement, much cheaper than of any other durable material. Your friend,

GEO. GEDDES.

Tyler, Onon. Co., N. Y., Nov. 17th, 1845.

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Since the above article of Mr. GEDDES, came to hand, we have received two others relating to the same subject. From one of them, signed "FARMER C.," and dated at Manlius, N. Y., we make the following extracts. After having stated that cement aqueducts are almost entirely superceding both wood and lead, he gives the first cost. "Here, the common price for digging ditch, materials, laying aqueduct, setting penstocks, &c., including every expense, is $1.50 per rod, warranted to stand." The lime is stated to be worth ten cents per bushel. "This cement is probably the best article for an under-ground aqueduct that can be used. Lead only lasts about ten years in this county; and frequently, under barn-yards and through strong soils, not near so long, being destroyed by the acids of the earth." "Farmer C.'s" directions for making these pipes, do not essentially vary from those given by Mr. Geddes. The writer thinks "water should not be admitted into cement pipes under three months after the work is completed, and then they should not be excessively strained by a heavy head of water."

The other communication on this subject, is from Mr. JAS. W. PECKHAM, of Easton, Washington county, N. Y. He states that he constructed a cement aqueduct which has been used more than a year, and says "the convenience and satisfaction already derived from it, has almost repaid the expense of its construction."

THE POTATO DISEASE IN EUROPE.

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Durham, England, Nov. 12, 1845.

L. TUCKER, ESQ.—The potato disease in this country has now assumed such a formidable aspect as to menace the very existence of that valuable crop. Government has become so much alarmed as to have sent three scientific men to investigate the nature and extent of the disease in Ireland. What they are doing in Scotland, the enclosed papers, from which you may, I should-think, profitably make copious extracts, will show. At the meeting where this investigation was first proposed, £100 were at once subscribed, and it is proposed to raise £500. The queries have been spread among the farmers in every part of Scotland, and numerous answers have been received. The counties of Sutherland, Rosshire and Caithness, are the only ones which the disease has not yet visited; elsewhere, the best authorities agree in stating that a considerable proportion of the crop is irremediably destroyed, and much of the remainder infected. In some places they go so far as to despair of saving enough for seed. Mills for manufacturing potato starch, are daily coming into operation, and work with very great success. It seems clearly established that the diseased potatoes are not noxious either to man or beast. I have myself eaten them without injury.

The form of disease most common, first shows itself as a discoloration upon the skin of the potato. When the skin is removed, there appears a black or brown spongy mass extending more or less toward the center of the tuber.

In the other form an acid is produced which converts the starch into gum and sugar, the water of the potato itself dissolves these, and the whole flows in a ropy mass, like thick honey.

In this last form, they are beyond recovery, and probably useless. In the first, they may profitably be fed to cattle, or be made into starch or potato flour.

Various methods have been proposed for checking, if not remedying entirely, this latter form. The best appears to be to spread them out to dry in thin layers, frequently picking them over, and when it is necessary to pit them, to put them in small pits lightly covered, and having tiles running through them so as to ensure ventilation. Thorough drying and careful picking has, in many instances, seemed to arrest the progress of the disease for the present at least.

Dusting them over with lime and covering with some absorbent material, such as peat ashes, or charcoal, is I believe of some efficacy. The Government Commissioners in Ireland, recommend surrounding each potato with ashes and lime, so that it should be quite distinct from every other. This may do very well for a few hundred tubers, but I apprehend that those who have 500 or 1000 bushels, will not approve of wrapping up each potato in ashes, like an orange in paper. Even if all the ashes were got, and the trouble of packing 500 bushels gone through with, in one week's time they might want picking over again, and then the whole elaborate edifice would have to be demolished.

I have seen few United States papers of late, and therefore know little of the extent of this disease in our country. I hear that it is very bad in Maine and New Brunswick. At any rate, I think that the publication of the enclosed queries would indicate to our farmers the points to which they should direct their attention. Very truly yours,

JOHN P. NORTON.

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The papers accompanying the above letter of our esteemed correspondent, consist of the proceedings of the meeting at which the subscription of £500 was proposed to be raised, to defray the expenses necessary to a thorough investigation of the cause, character and progress of the potato rot, and a circular from Prof. JOHNSTON, detailing the particular points on which information was desired. The investigation was entrusted to Sir WM. JARDINE, for the entomological part, to Dr. GREVILLE, for the botanical, and to Prof. JOHNSTON and Mr. FLEMING, for the chemical and practical part of the inquiry. The circular of Prof. Johnston shows the minuteness and extent to which it is intended to pursue the investigation, and we have reason to anicipate the most valuable results; though, in the language of Prof. J., "it is at present doubtful whether *any thing* can be done to arrest the disease; and more doubtful still, *what* can be done, *when*, and *how*. If these doubts are to be removed, it can only be by a conjoined scientific and practical, or experimental inquiry."

[ED. CULT.

AGRICULTURE OF SWITZERLAND.

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In a letter to the Editor of "The Cultivator," dated

Martigny, Switzerland, 4th Oct., 1845

LUTHER TUCKER, ESQ.—Switzerland is not the country in which to look for extensive agricultural investures or improvements; yet something may be learned from an abstract of their modes of deriving a livelihood from the earth. Small as is the country, there can be found within its boundaries nearly every variety of soil, and every variety of product, excepting such only as are peculiar to a tropical climate.

Cheese is perhaps the most common article of agricultural trade; and the cows and goats from whose milk it is made, are to be found upon mountain sides more than four thousand feet above the level of the sea. That of the Grisons, and the district about Grueyere is in most esteem, but neither are by any means equal to English or American manufacture; they are both poorly pressed and poorly kept, and to those who have delicate nostrils, the taste is by no means their least offensive property. Butter is not a general article of consumption, and is principally made for the eating of the summer *voyageurs*. It is only tolerably good at the best, and frequently very poor. By far the best agricultural districts are to be found in the vicinity of the larger lakes, particularly Geneva, Constance, Zurich, and along the borders of the Aar and Rhine. The Italian cantons, and the portions about Lake Neufchatel, I have not yet visited. The cattle in the flat countries are good, and I have seen many herds of excellent beeves fattened upon the river meadows; the mountain cattle are small, stout limbed, mostly of a dark grey color, with whitish noses and bellies, extremely gentle, and well suited to their situation. To the necks of nearly all, whether single or in droves, bells are attached—not our ordinary cow-bells—but properly formed, and good sounding metal, which jingling together upon a hundred hill-sides, make a mountain melody that no traveller in Switzerland can forget. Sheep are rough formed and coarse wooled, though I have tasted very delicate mutton in many districts. Swine are a long legged and long bodied race, of a tawny red color, better fitted for mountain scrambles than for the tooth of a gourmand. Goats have their own excellencies, and constitute the sole wealth of many a mountaineer whose summer pastures are higher than our highest mountains.

The tilled products of the higher regions, are potatoes and oats, with a few turneps, and here and there a bit of hemp. Next after these succeeds Indian corn and cabbage. Still lower, beans and pumpkins, with patches of vines upon the warmer hill-sides, and grass and gardens, and orchards, in the river valleys. Fences, except in the neighborhood of the larger towns, rarely occur, and division of lands is marked by stakes, or by a mere furrow, and sometimes even by less distinguishable bounds. Perfect agreement appears to exist among neighbors in respect to property, and I have seen in the mountains overhanging lake Geneva, peasant men and women gathering crops of *rowen* in a dozen different parties from the same field, where there was no apparent line of division, yet putting their rakes back to back without a word of dispute. Nor was the crop, though limited in individual cases to a spot of only a few rods square, without its value; since every blade was collected with the most scrupulous care, and carried off the field in blankets upon their backs. A few acres constitute wealth, and a half dozen goats make a dowry for a mountain bride richer than as many thousands in the valleys of New-England. One roof covers home and herd, and in the dirtier districts goats and bipeds mess together. Most of the farm labor is done by the women, and I can say little for their dexterity at the work. Implements are in general better than those in use in France. Scythes are short, broad, and of good metal; rakes of wood, and lightly made; forks of wood tipped with goats' horns. Plows, except in the vicinity of the great routes, are of clumsy construction, but do their work well. Carts or wagons, over many hundred square miles of agricultural territory, are things unknown; mule paths are their only roads, and mules' backs, or those of the women, the only means of carriage. Draining is an agricultural resource little known, and little needed; not so however of irrigation, the proper application of which in particular districts has quadrupled the products of grass lands.

Manures are every where husbanded with the utmost care, and their odors are widely diffused through all the most thriving farm villages. The use of tuns upon wheels to distribute liquid manures is common in the neighborhood of Zurich and Berne. The method of planting field crops is without order, and drilling I have in no instance seen. Potatoes are planted at random in the field, though very thickly; the tops are cut at harvesting and dried for the winter eating of the goats, and the ground dug over thoroughly with an implement resembling our potato-hook, though vastly more rude in its construction. The crops of Indian corn I have seen have been good. It is just now ripening in the valleys, and the last crops of hay are being gathered. Apples of very fair appearance and taste are plentiful in the lower districts, and pears abound on the borders of lake Thun, and along the banks of the Rhone. Plums grow in profusion about lake Zug, of a purple color, the size of the green gage. They are dried in large quantities, and form a considerable article of trade.

The pasturage of the mountains is good but short, and the higher pastures are fed upon during only four or five weeks of the heat of summer. The successive ranges of upper, middle, and lower pastures, are occupied by the herdsmen with their flocks, at different periods of the summer, as the severity of the weather, or scarcity of food may determine. In ordinary seasons, however, the migrations from lower to upper, and upper to lower pastures occur at regular intervals of time, and it is not a little exciting scene, to meet with a troop of eight or ten hundred cows with their noisy bells upon some wild mountain pass, defiling under the marching orders of two or three rough looking herdsmen, to some new pasture ground among the hills. The cheese is made upon the mountains, and in autumn brought down by sledges over the early fallen snows. The best cows are said to yield 30 to 40 lbs. of milk a day, through the summer, and two cwt. of cheese is the average product for the season.

The chalets, or huts of the herdsmen, are rudely built of logs, notched together at the corners, as are our western cabins, with wide sloping roofs, and shingles held in their places by timbers loaded with stones.

It is somewhat remarkable that in a country so little adapted to a general and improved practice of husbandry as Switzerland,—where the hopes of a season may be ruined in a night-time,—should have sprung up one of the first agricultural institutions in the world. I refer to that of M. Fellenberg, at Hofwyl, about 10 miles from Berne. Nearly a hundred pupils are in attendance, from all the different nations of Europe, not a few English among the number. Unfortunately, I lost the opportunity of paying it a visit. Its reputation is in Europe, of the highest character, and the success of M. Fellenberg, both in the practice of husbandry and instruction, undoubted.

A glimpse of Swiss country, as it comes through the window at which I sit, will close my letters for the year. A mile off, across the Rhone, rise mountains whose tops are 6000 feet above sea level; they are just touched with snow upon the crests of the bare limestone; 800 feet down, stunted firs are scattered, and group together thicker and thicker 1500 feet below. Little chalets, and spots of green grass, may be next distinguished; below, precipices and fir forests blend together, and trees with yellow leaves mingle with the evergreen. Further down upon a sloping side of the mountain, is a hamlet of a dozen chalets, all the wealth of whose inhabitants, consists in the goats or cows that browse on the few acres of pasture around them. At the edge of the mountain, cottages of a better character appear, and numerous vineyards. After all, appears the valley of the Rhone, rich in grasses, scattered over with orchards, and across the way a garden filled with corn, and beans, and cabbage, with an occasional hollyhock or dahlia—altogether as much like a garden on the Hudson, as you can suppose one to be, under the shadow of the Alps, and on the meadows of the Rhone.

Yours truly, D. G. MITCHELL.

NEATNESS IN FARMING.

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We have somewhere heard the remark, that with the good farmer, every thing gives way to his business—that utility is all, and appearance nothing;—hence you are not to expect neatness about his dwelling, his door-yard being cut up into mud by the farm-wagon and the manure cart, and the contiguity of barns, pig-pens, and kitchen, such as convenience, and not freedom from the peculiar odors of hog-yard and rich manure-heap, may dictate.

Now, to speak bluntly, this is all nonsense. It so happens, that in farming, neatness and thrift almost invariably go together. The same love of order which prompts the farmer to clear his yard of broken barrels, old hoops, fragments of boards and sticks of wood, and whatever else defaces and defiles his premises,—also prompts him to have a place for every thing and every thing in its place, which is calculated to bear upon real and substantial profit.

Some of the very best farmers with whom we are acquainted,—whose eminent success and heavy profits, separate them in this respect in bold distinctness from the rest of their neighbors,—are patterns of neatness; and the touch of their hand in the expulsion of every kind of nuisance is visible all over their farms. Their door yards show that the master is "at home;" the barn-yard, which is not so near the house that all the butter and cheese manufactured is flavored with the effluvia, exhibits the same neatness, even where all the refuse of other places is collected for enriching in due time the rest of the farm. A farmer of our acquaintance, with 160 acres, in whose farm-yard we could scarcely ever discover a wisp of straw in the wrong place, remarked, "O, I don't attempt to make a great deal from my farm—I expend so much in improvements, that my clear profits are only about a thousand dollars a year." Another of those neat farmers, in whose fields, cockle, docks, and chess, obtain no foothold, nor along whose fences a solitary elder bush or nettle is ever seen, raised twenty-seven hundred dollars worth of farm produce at the prices of 1844; and both of these farmers live in Western New-York, where prices are comparatively low, entirely away from the peculiar advantages of market which nearness to great cities gives.

Now, let no one say that these remarks are made at the wrong season of the year, and that nothing can be done for neatness and order in the winter. The same general rule, in some shape or variation, has an almost infinite number of applications. The care of domestic animals in winter, needs pre-eminently the application of this rule. No animal can thrive well in the midst of dirt. Even a pig does not love dirt for dirt's sake—he only happens to be so much of a philosopher, or rather stoic, that he is willing to endure dirt for the sake of a soft and cool bed in summer; for it has been found that these animals thrive better and fatten much faster when kept clean and *well curried*.

Horses and cattle are often neglected in cleanliness. We have actually known some who did not clean the manure from horse stables for months, allowing it gradually to thicken under foot with the accumulating litter till a foot in thickness,—and reasoning doubtless as the boy did who combed his hair once a month, and was astonished that such torture and trouble from the operation could be endured daily by other people. A farmer who does his own chores, can hardly afford to keep his horses so finely as the gentleman of wealth, who has a man for no other purpose; but every one should have his stable floor perfectly clean at least twice every day, once in the morning, and once at night before littering, and oftener would be better. Remember that the oftener it is done the easier it is accomplished.

There are many other particulars where neatness may be attended to in winter. Gate hinges and gate fastenings often need repair, that they may shut like clock work; boards become loose on old barns and board fences; tools become awkward for use, and need remodelling or renewing; and many other small matters, in doors and out, require attention. We are aware that to many of our readers, who are already examples for others, such hints as the preceding are not applicable—to such we can say that they need not read them—like the man who chisseled on the stone at the fording place, "When the water comes to this stone, it is unsafe to cross."

CULTIVATION OF FLOWERS.

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ADDRESS delivered before the *Aurora Horticultural Society*, Sept. 23, 1845, by DAVID THOMAS, President. Pamphlet, 11 pages.

SOME months since, we noticed the new and prosperous Horticultural Society at Aurora, Cayuga county, and had occasion to allude to the intelligence, taste, and enterprise, which conducted its proceedings. The present address is one of its ornaments and fruits. It is truly an interesting and valuable production. It could not fail to be otherwise, from the talents and long experience of its well known author. Our readers will doubtless agree with us, when we have given a few extracts. The following remarks on the subject of horticulture, furnish some new as well as instructive facts:—

"It might be hard to say what spot of the earth's surface has furnished the most flowers for our gardens; and whether that spot is located in the eastern or western hemisphere. It is true, the Cape of Good Hope has produced an astonishing number of beautiful plants; but most of them are unavailable to us on account of the severity of our winters; and yet so bountifully has our globe been replenished, that there are more from the colder regions than we can find room for, in our borders. Mountains that extend far to the south, yield us plants from their cold sides or summits. Thus shrubs and trees from the elevated parts of Carolina and Georgia, are generally hardy here; and even *Œnother rosea* from Peru, abides our coldest seasons, and becomes a weed. In this way, or on this principle, Mexico furnishes *Chelone barbata;* Nepal, the *Potentilla formosa,* and the same southern range of the Himalayas, the most delicious fruit of the temperate zone: I mean the peach.

"Plants conform by a kind of instinct, to the climates in which they are indigenous. Thus, on the approach of heat and drouth, the tulip contracts itself into a bulb, and waits for a more genial season to resume its growth. The Auricula, though an evergreen, sleeps safely under the snows of the Austrian Alps, but perishes without protection in the valleys below; and the holly-leaved barberry, another evergreen from the Rocky Mountains, suffers under our milder but more variable winters. We have, therefore, *tender plants* from very cold, as well as from torrid regions."

The importance of a diversity in soils, to successful garden management, is strongly illustrated:—

"The farmer and the florist act from very different motives, and select very different plants, *nutriment* being the main object with one, and *beauty* with the other. From the fertile plain, and the river flat, the cereal grasses were probably derived, as well as those that constitute our pastures and meadows; and it is worthy of notice that all these delight in calcareous soils. On the contrary, the florist has taken a wider range, and chosen his favorite from every variety of soil: not only from plains and alluvions, but from the cold mountain, the rugged hill, the moist valley, the comparatively barren waste, the shady swamp, and the open marsh. To many of these plants, however, lime is deleterious; and a perfect flower garden ought to represent a diversified country in miniature: shade and sunshine; here a plat of fertile soil, there a tract of bog, near it sterile earth, and yonder a bed of sand * * *

"When we consider that soils of almost every peculiarity have furnished us with plants, we cannot expect *all* these delegates to give up their predilections; and consent to grow side by side in the same border. Many, it is true, will do it, perfectly indifferent to soil, satisfied wherever their lots may be cast, and flourishing without abatement; but the wild lupin pines for its bed of sand, and 'the superb lily' for its bog. The laurel, so abundant ninety miles to the south, declines in health when removed to our common soil, and eventually perishes as if it were poisoned. The rose-acacia also refuses to flourish where lime abounds, unless lifted above it by engrafting on the common locust.

"Peaty earth, mixed with silicious sand, seems best to agree with delicate feeders, but soils in which peat forms no considerable portion will answer in some cases. Several years ago, I procured a Chinese Magnolia. It flowered once or twice, but became sickly, and its leaves lost their fine green. Being at a friend's house among the sandhills of Junius, I told him I wanted a bushel or two of the poorest soil of his farm; and got such as Indian corn might grow in, with pale yellow leaves and perhaps a foot high. In the spring I removed all the earth round the magnolia, as well as I conveniently could without disturbing the roots, and applied the steril mass, three or four inches in thickness. In a month, or less, the leaves resumed their fine green, and it has continued vigorous ever since."

The brilliant effect of cultivating flowers in large masses, is thus vividly depicted:—

"Many of you must have seen, or heard of, the flowery prairies of the west; and have noticed the enthusiasm with which travellers describe them. Now could we not get such glorious flowers for our gardens? Yes, but most of them would grow dim before the superior beauty of our old flowers. I am confirmed in this opinion by what I have seen of them in their native localities; and by examining herbariums of prairie plants. How then, you may ask, is an effect, bordering so closely on the sublime, produced by such means? I answer, because they appear in masses. The greater the multitude and the wider the space, the greater the display; and though within our walls and fences, we cannot *equal* nature, we can *imitate* her, for while she presents flowers by the acre, we can do it by the square yard. The snow-drop, crocus, hyacinth, and tulip, may all be employed for this purpose; and when congregated, have the most imposing effect."

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SOIL FOR GARDENS.

With another quotation, we close these extracts, which are only an average specimen of the rest of the address. The following remarks apply strictly to *heavy* soils, which to a greater or less degree, constitute the greatest part of the soils of this country:—

"Away from cities, the comfort of families depends much on the kitchen garden. The soil ought to be dry, rich, and easily pulverized. In this district, it is generally a heavy loam; and other means besides the plow, spade, or hoe, should be used to subdue its stubborn nature. In all cases, it should be well drained. All surplus water, whether on the surface or below, should be led off. Every tendency to poaching or baking should be prevented. Some of you will understand the benefit of ridging the ground in the fall, so that the coming frosts may press in between the particles of every clod, and thrust them asunder; but many persons have yet to learn that the sweepings of the blacksmith's shop, chip dirt, and old plaster from walls and ceilings—too often thrown into the road—are excellent manures, and at the same time keep the soil loose and mellow.

"*Carting in sand* is another labor-saving operation. It will last for ages, and prevent many a hard thrust of the spade, or stroke of the hoe. Let me suggest, however, that a stiff soil is broken most by *coarse sand;* and from observation, I incline to believe that one load of this kind will do as much good as several loads where the particles are very fine.

"The effect of *blacksmith's cinders* when broken and applied; and *burning the soil,* which I have also tried to some extent, are both remarkable for loosening and fertilizing at the same time; and it may afford some encouragement to reflect that these are permanent improvements—to benefit posterity as much as ourselves. The crops from old coal pits, burnt brush heaps, or the sites of old buildings, will sufficiently illustrate these remarks."

IMPORTANCE OF WELL DIRECTED LABOR.

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"What great effects from little causes spring,
What wealth does labor well directed bring."

A single stroke of an axe is of little consequence; yet by the continual application of that small power, properly directed, what amazing effects are produced! The sturdy oak and lofty pine do not simply own its power, but whole forests fall before it, and the wilderness becomes a garden.

Industry well directed, will give a man a competency in a few years. The greatest industry misapplied is useless.

As an example, there is my neighbor, Seth Steady, the blacksmith, is not only an industrious man, but his industry is applied directly to one object. His hammer is heard at dawn of day, and the fire blazes in his shop during the evenings, from the 20th of September to the 20th of March. Go to this shop at any time of the day for any kind of work, you are sure to be waited upon. The consequence is, his purse is filled with dollars, and his cellars well stored with provisions, and that's what I call quite comfortable. Although suitably liberal, and enjoying the good things of life as he goes on, ten years of health will enable him to purchase a good farm.

As a contrast, there is my friend Nat. Notional, the busiest and most industrious mortal in existence; as the old saying is, "he has too many irons in the fire," and with all his industry he goes behind-hand.

He has a fine farm, but instead of pursuing the cultivation of it, he flies off and seizes on every new project that occurs.

A few years ago he concluded to give up the dairy business, in consequence of the low price of butter and cheese; sold his cows at a low figure, and purchased sheep at a high rate, for wool then commanded a high price. By the time he had got fairly into the raising of wool, down went the price of wool, and up went the price of butter and cheese. He then sold his sheep and purchased cows again, for cheese was up, and wool was down. Last year, after sowing a number of acres of grain, he resolved to rent his farm, sell the grain on the ground, buy a team and go to hauling; for, by a nice calculation, he had proved that money might be made by it. A team was procured; but after one or two trips, he concluded to sell his team, build a saw-mill, and go largely into lumbering. The dam was completed, the irons procured, and three-fourths of the expense incurred, when by a nice calculation, (for no one makes *nicer* calculations,) he found that an oil-mill would afford the best profit; and to work he went with great industry, building an oil mill. I happened to go there a few weeks afterwards, and the whole organization of the mill was undergoing an alteration, to fit it up for a cotton and woolen manufactory.

A quizzical friend intends to propose to him to abandon that project and enter largely into the manufacture of flour, and I have no doubt that he will readily accede to the proposal.

So with all his industry and expense, he is neither benefiting himself nor the public. Such a course continued 10 years, would sink the best farm in the country.

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IMPORTANCE OF DOING BUSINESS IN SEASON.

"Take time by the foretop." Old grandfather Time, so far as I have seen him pictured out in all the editions of the New-England Primer, is as bald as a cobbler's lapstone. The text, therefore, cannot be taken literally. To make it understood right, and it is full of wisdom, is my present purpose. Gentle reader, to "take time by the foretop," means nothing more nor less than to *do your business in season.*

If you are a farmer, it is particularly necessary that you should "take time by the foretop." The whole of the profits of the farmer depend on his business being done in season. If a week gets the start of you in the spring, you may chase it all summer without overtaking it.

Now for the contrast. There's neighbor Scrabble; he has a good farm, and is a hard working, frugal man; nevertheless he is always behind-hand. He plants his corn when all the neighbors are weeding theirs; it gets hoed but once, because the harvest presses upon him; the early frost generally kills half the weeds do not choke, and the consequence is, off from an acre which ought to yield him 50 bushels, he gets but 15 or 20. Come, Mr. Scrabble, pull up—get your crops in well, and in season; "take time by the foretop," and your labor will be easier by half, and twice as profitable.

C. N. BEMENT.

American Hotel, Albany, Dec., 1845.

CORN-STALK SUGAR AND MOLASSES.

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MR. TUCKER—An opportunity offering, I am induced to send you samples of sugar and molasses from the juice of corn stalks. It is now about seven weeks since this was pressed and boiled. You will perceive that the granulation and drainage is tolerably perfect. 688 lbs. of the chrystalizable syrup was made from one measured acre; and, had it not been from some loss sustained at the first boiling, I believe the amount would have been 700 lbs. Over 100 lbs. per day was made at four successive boilings.

I believe it is in the power of any farmer to make abundance of sugar and molasses for his own use. The apparatus is simple, and within the reach of almost every one; all that is needed is a mill to crush the stalks and express the juice, and three common iron kettles, set in a brick arch, for boiling. Neither is there any mystery or difficulty in the process, but what a little experience would enable any one to overcome. The principal things to be attended to in the boiling are, to be careful to skim, and get the juice well clarified before it comes to a boil; some milk and flour, as recommended by Mr. Webb in your July No. for 1845, facilitates this very much. Some *clear* lime-water is also necessary. We have found that in using the cream of lime, or the lime mixed up in the water, prevents the fecculent particles from coming to the surface, and makes it necessary to strain, and occasions much trouble and loss; on the contrary, the *clear* lime water does not have this effect.

It is also necessary to boil as rapidly as possible; the quality of the article and the chrystalization depends altogether on this; and lastly, it is necessary to know when it is boiled sufficiently to granulate. We have this year boiled without a thermometer, and found no difficulty by attending to the directions given in statements formerly published and republished in the reports of the Commissioner of Patents.

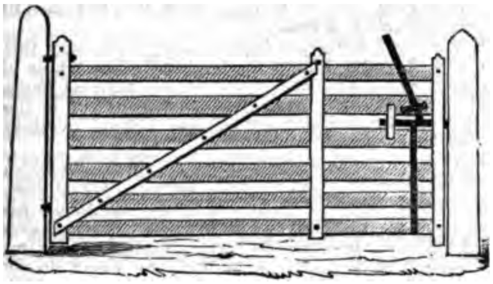
One of my neighbors has erected a mill, &c., and is at this time engaged in boiling. I believe he will fail to make sugar, but is making a satisfactory article in the way of molasses, and I have no doubt will succeed another year.

I have just cut a fine crop of green corn for fodder, grown since the middle of July. My method is to sow three bushels to the acre broadcast, on wheat stubble; plow in, and then harrow well: cut with a grain cradle previous to the first frost. If the weather will permit, leave in the swath a day or so, to wither; tie up in bundles, and shock up, similar to oats or other grain. My practice is to set one in the middle, and eight around it; then cover with one. In this way they stand well, and shed off the rain effectually, and should be left in the field several weeks to cure.

Yours respectfully,

JOHN BEAL.

New-Harmony, Ia., Oct. 14th, 1845.



FARM GATES.

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"J. H. S." asks us to insert a plan for "a good substantial farm gate," and in compliance with this request, we herewith give two plans, which, considered in all respects, we think, as good as any we have received.

The one above represented, was received from Solomon Henkel, Esq., of Virginia, and was given in the Cultivator in 1841. Mr. H. considers it a "*complete farm gate*," and describes it as follows:—"It is twelve feet in length, and five feet in height, counting from the lower edge of the lower slat, to the upper edge of the upper slat. The slats are six in number, one inch by six inches, and twelve feet in length. The heel piece is three by six inches, and six feet in height. The middle and head pieces are three by three inches, and five and a half feet in height. The braces one inch by three inches, and nine feet in length. The slats ought to be made of good yellow pine, or good white oak, without any sap; the braces, heel piece, middle and head pieces, of white oak. The spring, trigger, bolt, and both brackets, are made of locust. The heel piece, middle and head pieces, have each one rivet near each end, so as to keep them from splitting. The braces, one being applied to each side of the gate, are fastened on by six rivets passing through the braces and slats, and join the heel and middle pieces by a shoulder, as shown in the cut. Two rivets pass through the two bottom slats and the springs. Two rivets confine each bracket, and one passes through the middle of the upper bracket, the trigger and slat; making in all nineteen rivets. The spaces between the slats are graduated so as to leave a space of two and a half inches between the two bottom slats, and seven inches between the two upper slats. The whole of the stuff ought to be plained and painted with Venetian red. The hooks and hinges are make of tough iron, not very heavy. The hinges pass through the heel piece, and are secured by taps. The lower hinge is square, having a hole through it, through which the shaft of the hinge is passed up to the eye, so as keep the gate from swagging. The upper hook ought to be somewhat longer than the lower; it ought to be nine inches in length, and bearded on two sides, so as to keep it from drawing out. In order to keep the gate from being thrown off the hooks, it will be necessary to have a tap put on one of the hooks. The posts ought to be made of good white oak or locust; the back post ten feet long, and the front one nine feet. The back post ought not to be less than eighteen inches in diameter at the lower end, and should be sunk in the ground three and a half feet; well filled in with stone at the bottom, and another layer near the surface of the ground; and the balance of the hole should be well rammed with clay. The front post will be deep enough, if put into the ground three feet. The posts, before putting them up, should have the bark taken off, and the upper ends cut to a cone. The bolt may be so constructed as to slide along a level leading to a mortice made on the inner side of the front post. Two locust pins inserted into the front post and projecting two inches, will answer for the gate to rest against.

Where the gate is to be used to a field, I should prefer hanging it level; but where it is used to a barnyard or mouth of a lane, I should give it what we have call the double swing, so that when it is thrown open, it will remain open without being propped; and when half shut will fall shut of its own weight."

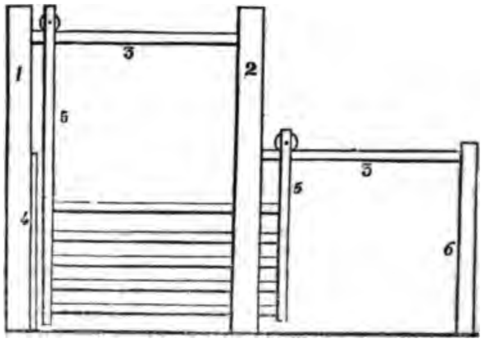

Fig. 6.

The other cut, fig. 6, represents what is called a "roller gate," which for sections subject to great falls of snow, possesses some advantages over the swinging kind. The plan was furnished by an anonymous correspondent and published in the Cultivator for 1842. The person furnishing it says:—"It makes a firm and lasting gate, with less expense than any I have seen. It saves at least half an hour shovelling snow after every severe snow storm; it plays easily and is not likely to get out of order."

Description.—1 gate-post 4 by 6 inches—2, do., with a mortice the same as the height of the gate—3, 3, rails for the gate to roll upon—4, two slats nailed on post, four inches apart inside, to keep the gate from being pushed either in or out when shut—5, 5, upright posts, 3 by 4 inches, with a mortice in the upper end long enough to admit the rail and a cast-iron or hard wood pulley four or five inches in diameter, upon which the gate hangs—6, is a post set beside the fence merely for the purpose of morticing the rail into. It can be made of any size required.

Another good plan of a gate will be found in vol. IX. of the Cultivator, p. 131.

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Since writing the above we have received the following from a correspondent.

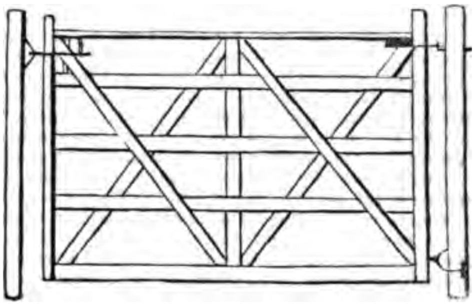

Fig. 7.

Mr. Tucker—The above is a plan for a light and durable farm gate. The slats are of pine, one inch in thickness and three in width. The top piece is of ash, three by four inches at one end, and three by three at the other. The head pieces are oak, three by four inches, one; the other three by two and one-half. The height is four feet and the length ten and one-half feet. The latch is wood, suspended by a chain, and passes through the head piece. A block about one and one-half inches in thickness in the center, but even with the post at the edge, is made to catch the latch as the gate swings to and fro. The lower hinge is cast iron, with two branches resting upon oblong staples driven into the post; when the gate swings one branch supports it. The perpendicular braces are riveted to the slats. The cost is about three dollars.

J. H. C.

Otsego county, 1845.

ORIGIN OF THE MORGAN HORSE.

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The following statement, for which we tender Mr. **Wier** our thanks, fully confirms the account heretofore given in "The Cultivator," of the origin of this celebrated breed of horses. Our own investigations long since satisfied us of its truth. It will be seen that Mr. W. has been able to add a very important item to the history, having ascertained the pedigrees of both sire and dam of the original Morgan horse.

Mr. Editor—I noticed in your last number an article on this subject, so interesting to all lovers of a good horse, which closes with an inquiry where the Chelsea horse, the last surviving stallion by the original Justin Morgan horse, now is. In reply to that inquiry, I have to inform you that this horse, for the last ten or fifteen years, more generally known in Vermont by the name of the *Morgan Bulrush*, is now owned by me, and is at this time in good health at my stable in Walpole, New-Hampshire.

For the last fifteen years my business has called me frequently into almost all parts of Vermont, and I have been led to make very extensive and particular inquiries into the history of the Morgan horse. Although there are six or eight, or more, different stories in circulation in relation to his origin, and several of them attempted to be supported by affidavit, yet I perfectly agree with you that the account given by Justin Morgan's son, Justin Morgan 2d, who is a merchant now in business at Stockbridge, Vermont, and a gentleman of intelligence and standing, extended and confirmed by that of Mr. John Morgan, is the only one entitled to belief.

From my correspondence with Justin and John Morgan, and others, I am enabled to state the pedigree on both sides of the Morgan horse. He was foaled in 1793, was sired by *True Britton*, or *Beautiful Bay*, owned by Sealy Norton, of East-Hartford, Conn., and then kept by John Morgan at West Springfield, Mass. True Britton was sired by the imported horse *Traveller*.

The dam of the Justin Morgan horse, at the time he was sired, was owned by Justin Morgan himself, at Springfield, Mass., where he then lived. The dam is described by Mr. John Morgan, who knew her, as of the *Wild-air* breed, of middling size, with a heavy chest, of a very light bay color, with a bushy mane and tail—the hair on the legs rather long, and a smooth, handsome traveller. She was sired by *Diamond*, a thick heavy horse of about the middling size, with a thick, heavy mane and tail, hairy legs and a smooth traveller. Diamond was kept by Justin Morgan himself, at the time the dam of the Morgan horse was sired. He was raised in East-Hartford, Connecticut. His sire was the *Wild-air*, known as the *Church horse*. His dam was the noted imported mare *Wild-air*, owned by Capt. Samuel Burt, of Springfield, Mass. The Church horse was sired by the horse *Wild-air*, imported by Delancy, of Long Island, and, as it was said, was afterwards taken back to England.

Mr. John Morgan describes True Britton as being a high-headed and hollow, or sway backed horse, and his stock of such a description; and states that the *Wild-airs* also, were generally so.

I have ascertained that there is a man now living in Royalton, Vermont, who recollects that Justin Morgan, when taking to Randolph the two years old colt, in 1795, called at his father's tavern in Royalton, and when asked what he was going to do with the colt, said he was going to keep him for a stallion; and recollects remarks that were made upon the colt's heavy mane and tail.

Judge Griswold, of Randolph, also tells me that he was invited by Justin Morgan, the morning after the colt came there, to go into the pasture and see him, and was told he should keep him for a stallion. He also says that the colt came there from the south, and fixes the date in the fall of 1795. Similar facts are also in the recollection of other persons now living in Randolph.

Justin Morgan, senior, died at William Rice's, in Woodstock, Vermont, in March, 1798. He then had the horse with him, and shortly before he died sold him to Rice, who sold him to Robert Evans, who sold him to Mr. Goss, of East-Randolph, for $100, to be paid in neat stock in a year without interest: as I am informed by Mr. Rollins, a son-in-law of Mr. Goss, now living in Chelsea, and by others. This Mr. Goss took him to his brothers in St. Johnsbury. He was kept in that family a number of years, and after passing through several other hands, finally died at Chelsea, the property of Mr. Bean. I am satisfied from my inquiries, that these facts can be amply supported by the testimony of many persons now living, from their own personal knowledge.

There were only four of the old Morgan horse's colts kept as stallions. These were the *Revenge*, who died at 24 years of age; the *Sherman horse*, who died at 26; the *Woodbury horse*, who died at 22, and the *Chelsea horse*, or *Bulrush*, now living here.

We also have, in this town, Morgan mares, selected with care for their good qualities, and of the highest Morgan blood now existing, obtained expressly with a view to preserving the Morgan breed in its greatest possible purity.

Frederick A. Wier.

Walpole, N. H., Nov. 34, 1845.

EXPERIMENTS WITH GUANO.

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Luther Tucker, Esq.—In looking over the Cultivator of Nov. 1845, I observe some experiments with guano, made by Mr. R. Parnell, with no regard to quantity of land or guano, without which I do not think you can make any fair comparison. Having made some experiments by measuring the land and weighing the guano, I herewith hand you the result.

First, I measured three pieces of land adjoining each other, each containing one-fortieth of an acre.

In the drills of the first, I put 5 pounds of guano in the raw state, scattered evenly through the drills, and planted with potatoes, which upon digging yielded at the rate of 215 bushels per acre. In the drills of the second one-fortieth of an acre I put 7½ pounds of guano, or at the rate of 300 pounds per acre, scattered evenly through as before, which yielded at the rate of 207½ bushels. In the third one-fortieth of an acre, I put 10 pounds of guano, or at the rate of 400 pounds per acre, in same manner as above, which yielded at the rate of 212½ bushels per acre. Adjoining the above, I measured another one-fortieth of an acre, one-third of which, the one-one hundred and twentieth part of an acre, I put in the drill as above, poudrette at the rate of $20 per acre, which yielded at the rate of 142½ bushels per acre. In the next, I put poudrette at the rate of $40 per acre, scattered evenly through as before, which yielded at the rate of 180 bushels per acre. In the next, I put poudrette at the rate of $80 per acre, scattered as before, which yielded at the rate of 155 bushels per acre. Adjoining the above, I measured another one-fortieth of an acre, the drills of which I filled with a mixture of horse, hog-pen, and cow-yard manure, in about the quantity that farmers generally use; this last yielded at the rate of 135 bushels per acre.

I would also remark, that I arrive at the cost of the poudrette by what I paid, 12*s*. per barrel; the potatoes were all planted on the 16th day of March, and were all of the same kind, (Mercers.) The ground, a light sandy loam, broken up last fall, and in very poor heart.

There was a middle sized apple tree stood in one of the furrows of the second experiment of guano, and one in the third of poudrette. There was little or no difference in the size or appearance of the potatoes in any of the drills; the ground I do not think was wet through to the manure from the time of planting to digging; the guano was part of the cargo imported by Messrs. E. K. Collins & Co., in the ship Shakspeare.

Samuel Bradhurst

Is'ip, L. I., Nov. 17, 1845.

FARM ACCOUNTS.

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L. Tucker, Esq.—As a better system of keeping farm accounts might be adopted, than is generally practiced, I will give an outline of the way in which I keep mine, in hopes that those who pursue no system will avail themselves of its advantages, and that those who have a better will make it known for the public good.

Nov.	5.	C. Johnson,	1	1	Drawing manure on heap,	$	36
"	"	W. Stebbins,	1	5,6	Capping wall bet. 5 & 6,		38
"	6.	C. Johnson,	1	4	Plowing for barley,······		36
"	"	W. Stebbins,	1	1	Steaming potatos for hogs,		38

The first two columns are for the date—the third for the name of the person employed—the fourth for the time employed—fifth, for the number of the lot on which the work is done—sixth, for the statement or synopsis of the work done, and the two last for the amount of the day's wages.

In the first place, it will be necessary to have the farm divided into convenient lots; to have them all numbered, and to have a map of the same. You will then be enabled to keep an exact account of the expense which every crop subjects you to, and decide which are the best and most profitable crops to raise. In order to keep an accurate book, the account should be put down punctually every night after the labors of the day are over, and the time required for this duty will be so trifling that at the end of the year one will consider himself paid an hundred fold in the satisfaction he will obtain upon looking over his book to see what he has done—when, where, and by whom done, and how much he has realized or sunk by the operation.

To the scientific farmer, it will show the course of treatment each field has been subjected to as far back as the date of his book—the time required for the maturing of crops, &c., &c. This book should be considered a part of the realty, and always remain in the possession of the person occupying the farm.

E. V. W. Dox.

ON CURING BEEF AND PORK.

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L. Tucker, Esq.—In your October number, you expressed a wish to be informed of the "results" of curing pork with *hot brine*. My practice is to cut the pork into five or six pound pieces, take off all the lean, and then pack the pieces in a barrel, with a plenty of rock salt at bottom and between the layers. A brine, as strong as salt will make it, is boiled and skimmed, and poured *boiling hot* on to the pork—enough of the brine to cover the pork. When I say a *plenty* of rock salt, I am aware that I speak indefinitely. But I have never measured the salt used. Probably I use half a bushel to a hundred pounds. No more salt will be dissolved than is taken from the water by the pork. What remains after the pork is gone, is as good as new for a second curing. So there is no loss in using more than enough. I have practiced this mode of curing pork for fourteen years with unfailing success.

It is extremely difficult to cure pork that is divested of the lean, with cold brine. The inspection laws of Connecticut direct pork to be salted with thirty-five pounds of St. Ubes, Isle of May, Lisbon or Turk's Island salt, (Rock salt,) exclusive of the pickle "made of fresh water as strong as salt will make it, and three ounces of salt-petre to one hundred pounds of pork." The pickle is always applied cold. Pork for exportation is well preserved in this manner. But it must be remarked, that it is packed with the lean attached. If the lean is all taken off, I have found that it generally spoils, in case it is thick pork.

As my pork is bought in the hog, it always comes to me cooled; so that I cannot speak from experience as to the safety of packing it before the animal heat has left it. But there is good reason for believing that all meats are as well cured before they are cold as after; perhaps better, *provided the salt is properly applied*. Forty years ago, I met with some important suggestions on this subject in Jackson's "Reflections on the Commerce of the Mediterranean;" which, as appears to me, are worthy of attention at the present day. I therefore send you an extract, in which is described the mode in which beef was cured at Tunis, (coast of Africa,) for the use of British shipping in that port.

"We killed upwards of forty bullocks in the hottest season, and, by observing the following method, never spoiled one ounce of meat. The animal should be killed as quietly as possible. As soon as he is skinned and quartered, begin to cut up in six pound pieces, not larger, particularly the thick parts.

Take half a pound of black pepper, half a pound of red or Cayenne pepper, half a pound of the best salt-petre, all beat or ground very fine; mix these three well together, then mix them with about three quarts of very fine salt; this mixture is sufficient for eight hundred weight of beef.

As the pieces are brought from the person cutting up, first *sprinkle* the pieces with the spice [mixture above described,] and introduce a little into all the thickest parts; if it cannot be done otherwise, make a small incision with a knife. The first salter, after rubbing salt and spice well into the meat, should take and mold the piece, the same as washing a shirt upon a board; this may be very easily done, and the meat *being lately killed, is soft and pliable;* this molding opens the grain of the meat, which will make it imbibe the spice and salt much quicker than the common method of salting. The first salter hands his pieces over to the second salter, who molds and rubs the salt well into the meat, and if he observes occasion, introduces the spice; when the second salter has finished his piece, he folds it up as close as possible, and hands it to the packer at the harness tubs, who must be stationed near him; the packer must be careful to pack his harness tubs as close as possible.

All the work must be carried on in the shade, where there is a strong current of air; this being a very material point in curing the meat in a hot climate. *Meat may be cured in this manner with the greatest safety, when the thermometer in the shade is at* 110 *degrees, the extreme heat assisting the curing.* A good sized bullock of six or seven hundred weight may be *killed and salted within the hour.*

The person who attends with the spice near the first salter has the greatest trust imposed upon him; besides the spice, he should be well satisfied that the piece is sufficiently *salted* before he permits the first salter to hand the piece over to the second salter.

All the salt should be very fine, and the packer besides sprinkling the bottom of his harness tubs, should be careful to put plenty of salt between each tier of meat, which is very soon turned into the finest pickle. The pickle will nearly cover the meat as fast as the packer can stow it away.

By this method there is no doubt that the meat is *perfectly cured in three hours from the time of killing the bullock;* the salt-petre in a very little time strikes through the meat; however, it is always better to let it lie in the harness tubs till the following morning, when it will have an exceeding pleasant smell on opening the harness tubs, then take it out and pack it in tight barrels, *with its own pickle.*

Provisions cured in this manner will keep during the longest voyages, are more wholesome and more palatable than any other, and a sure preventive against the scurvy, partly owing to the spices that are made use of in the curing; and also, that a careful cook may always make good soup from this meat, as the salt is very easily extracted; for the same operation which served to impregnate the meat with the salt [molding?] will also serve to extract it."

The subject of curing meats, has not received the attention of chemists as much as the agricultural and commercial interests of the world seem to require. It is a problem of incalculable importance, how we can best preserve both flesh and fish; especially, how we can do it with just salt enough to be agreeable to the palate, without the trouble of extracting it. Pork and beef hams, we know, may be so cured. Whether the smoking, which those articles receive, is indispensable to their preservation, is by no means certain. What a waste of salt, and of goodness of the meat, and even of the meat itself, (witness the thousands of cattle thrown away, except the hides, in South America,) would be prevented by a solution of that problem.

This article is already too long; I therefore stop. I hope some of your able correspondents will take up this subject. If they do not, you *may* hear from me again.

NOYES DARLING.

New-Haven, Conn., Nov. 17, 1845.

FARMING IN OHIO.

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GREAT CROP OF INDIAN CORN.

I have just returned from a tour through Licking, Delaware, and Franklin counties. In passing through Brownsville, I called on my old friend CHAS. BLANDY, from whom I always learn something new and interesting to the agriculturist. He has just gathered in a crop of corn from three acres of rolling land, which measured a little over 400 bushels—(133 bushels to the acre)—which I think is a very extraordinary crop for this kind of soil. Mr. B. informs me that when he came in possession of this land, eight years since, it was very rough and uneven—it having been used for making and burning brick. After clearing off the rubbish, filling up the holes, and digging 110 rods of under drain, he plowed, manured lightly, and sowed wheat with grass seed. His first crop was only eight bushels to the acre, and that was more than his neighbors expected. Since then it has been occupied as a pasture lot for cattle and hogs. The surface soil was only three to four inches deep, of a sandy loam, and fragments of sand-stone in considerable quantity—the sub-soil of yellow clay and sand-stone—the whole piece rather wet and spouty. He plowed it in October, 1844, ten inches deep, and last spring spread on 100 two horse wagon loads of compost manure from the yard where he had kept his cattle. This manure was made up from the stable, intermixed with coal-ashes, waste fodder, and several courses of saw-dust put on to make it clean and dry for the cattle. This had been accumulating for three years. After spreading this manure, he cross plowed 12 to 15 inches deep, and harrowed thoroughly so that the surface soil and manure was well intermixed with a portion of the sub-soil and completely pulverized.

He planted the corn in rows three feet apart, and two feet in the row—three corns in a hill. The manure being old and rotten, there were no weeds. The corn while young was harrowed once and plowed twice. The corn is a light mixed flesh color, commonly known here as the Pennsylvania corn—long grain and thickly set in straight rows—cob small, of reddish appearance, and the grain very heavy.

I afterwards saw some of Mr. Blandy's neighbors, who performed part of the work on this lot the past season, and assisted in getting the corn in, and what I learn from them is in confirmation of this statement.

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BROOM CORN.

The fine intervale lands of the Messrs. Sullivant, near Columbus, have as usual been covered with corn this season, on 400 acres of which has been grown, Broom Corn, by Mr. Eaton, of Chillicothe, who I understand has this season grown the same crop near Circleville and Chillicothe, in all to the amount of 1000 acres, which has been very nicely prepared, put in bales and pressed, and has already gone forward to be shipped to England, where the owner has workmen employed in manufacturing it into brooms.

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CROPS OF LAST SEASON.

On all the flat lands in the nortern part of Licking, parts of Delaware and Franklin, and considerable portion of the adjoining counties north, the wheat crop of last season was almost a total failure, in consequence of a frost on the 29th May. I am told that the farmers now have to buy their wheat for family use, and many who early in the spring thought their prospects good for a crop of 400 to 600 bushels, did not get even so much as their seed.

The corn crop was very good, and this is being hauled a distance of twenty miles to Newark to be shipped to the Western Reserve, where they have lost almost all their crops by the severe drouth.

I perceive that business, in sections where they *chiefly* rely on the *wheat crop*, has considerably declined. In other places where corn and pork are considerable items of their resources, business is about as good as usual.

In Muskingum county, they think they have little more than half of an average crop of wheat, but what there is, is of superior quality. They have here suffered comparatively, but little with the drouth. They have a new article of export—Hay. It is put into bundles, pressed and shipped to Pittsburgh, paying a good price to the grower, and a profit to the shipper.

JOHN R. HOWARD.

Zanesville, Ohio, Dec., 1845.

WOOL-GROWING ON THE PRAIRIES OF ILLINOIS.

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LUTHER TUCKER, ESQ.—But a few years since we emigrated from Vermont into this State. We soon became satisfied that wool could be grown much cheaper here than in our own native state. In 1843, we purchased in Columbiana county, Ohio, 2,300, and drove them through by land into this region. In crossing streams without bridges, we managed to take about 50 to the water's edge at a time, and by the aid of two shepherd's dogs, would crowd them into the river. Then these two dogs would go and aid the one that was left to guard the main flock, and urge them all up and into the stream together. They would all swim over without much difficulty. They travelled generally about twelve miles a day.

On our arrival home we let and sold all but 1200. Our rule for letting was for half the wool and half the lambs, and as many sheep returned as let, at the end of the year. We wintered them on prairy hay, and a very little grain fed after the month of February, not to exceed 160 bushels of corn. The first winter we lost about 60, and raised over 400 lambs.

The second winter we fed part of the flock timothy and clover; the balance on wild prairie hay.

Those wintered on the prairie hay did equally well as those fed on the English grasses. We met with considerable losses by dogs the second winter, otherwise the sheep came through finely without grain, except to about 30 stock bucks, wintered by themselves; these we fed a little grain daily through the winter. Our flock at this time amounted to about 1050. We also raised this season over 400 lambs.

The first year our flock yielded a little short of three pounds of wool to each sheep, and sold for 33 cents. This season we sold for 27½ cents per lb., and the yield increased a little over one-fourth of a pound to the fleece.

We procured good rams in Ohio at ten dollars each, said to be full blood merinos. It is no more than justice to acknowledge the increase of our second clip from a lot of 64 lambs got by a yearling buck which we ordered from Vermont, from the flock of S. W. Jewett, said to be a son of this stock buck Fortune. Every fleece from this crop of 64, was weighed as fast as shorn, and we did not find one that sheared less than four pounds. The lot averaged over five and a half pounds. One lamb got by this young buck, and out of a ewe we purchased of Mr. Jewett, which dropped in the month of April, sheared this season, a fleece of eight lbs. fifteen ounces of beautiful wool. We therefore have become satisfied of the difference in breeds of sheep. We might have added that these two Vermont sheep bore the first prize at our state and county shows in 1843 and 1844.

We think our sheep are better washed than we used to clean them in Vermont. Our mode of washing is cheap and expeditious. We run two fences angling from the stream where we wash, to guide the sheep at the terminus; we build a platform over the river; then by the aid of our dogs run them over this plaftorm as fast as possible to give motion to the water. They are obliged to swim about four rods to strike the opposite bank. Then return them across a shallow place below, where they can wade the stream. We jump them off this plank work into the river three or four times, till we are satisfied they are thoroughly cleansed. In this manner, we might, with two men and two dogs, wash ten thousand, if at hand, in one day.

We cut wild prairie hay from lands owned by government and speculators who do not occupy. On contract it is delivered in our yards at one dollar each ton.

The yearly cost of keeping our sheep cannot be over thirty cents per head. One boy we employ the year at eight dollars a month. He has the sole charge of the flock with the aid of two shepherd's dogs, which we could not do without. They aid in yarding them nights, and keep off the small prairie wolf.

A Scotchman by the name of Mitchel, raises and trains these shepherd dogs from a pair of Scotch collies, imported by Murray & Co. He sells his puppies at about four dollars each.

Yours, &c., TRUMAN & ISAAC HARVEY.

Lasalle, Illinois, Sept. 25th, 1845.

THE POTATO ROT.

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MR. EDITOR—Although a farmer on rather a limited scale, it has fallen to my lot to make a few observations relative to the disease called the rot in potatoes, which, were they published, I have thought might be of service to some of the agricultural community.

In 1844, I planted potatoes on three different parts of the farm on which I am situated. From part of one small field, consisting chiefly of a loose, gravelly soil, I obtained about eighty bushels of potatoes. And among these eighty bushels there were probably near a peck of rotten ones. And almost all of these grew on a part of the field which was lower than the rest of it, and where the soil consists, to a considerable extent, of loam and clay. The field I have been describing, was plowed twice before planting; and in that, as well as in the subsequent work among the potatoes, it was my aim to work when the land was in a sufficiently dry state to pulverise well.

On another part of the farm which is nearly level, and where the soil consists to a much greater extent of loam and clay, than the field I have just described, I obtained nearly thirty bushels of potatoes, and out of thirty bushels, there were probably as many as one bushel of rotten ones. The land for these potatoes was also plowed twice ; and care was also taken to work the land when dry enough to pulverise.

From a part of the farm which consists chiefly of a side-hill of a loose, gravelly soil, I obtained as many as seventy-five bushels of potatoes; and out of these seventy-five bushels, there were probably not to exceed four quarts of rotten ones. And what rotten ones there were, were almost wholly on a part of the field which is nearer level than the rest, and where the soil consists to a greater extent of loam and clay than the other parts of it. The seed potatoes planted on the last mentioned piece, were many of them of the same sorts as those which rotted so badly in the small and nearly level piece I have before described.

A part of the growing season of 1844, was unusually hot and wet. And these are probably among the causes why so many potatoes rotted that season. From my own experience, and from observations I made this season, (1844,) I came to the conclusion that light, loose soils, and thorough plowings, are among the best means of obtaining potatoes free from the rot. And at the same time it may be said, that rich soils, with such management, are well adapted to withstand any ordina- [illegible]

This season, (1845,) the disease among potatoes has assumed a somewhat different aspect in this region of country from what it presented in 1844. In many cases the potatoes which at digging time appeared to be sound, have rotted after being buried in the field, or put in cellars. And while I do not dispute that this result is in some degree attributable to the varieties of potatoes used for seed, yet my observation leads me to believe that much of it is to be charged to the wet, heavy state of the lands on which the crops were raised. And the following is one of my reasons for believing so.

This season I planted near one acre of potatoes on land which consists almost wholly of a light, loose soil. The ground was plowed three times before planting, which rendered it so finely pulverized that the heavy rains of the latter part of the summer had an opportunity to leach down so as not to remain in a superabundant quantity near the top of the ground. Out of this acre of potatoes there were probably not to exceed two quarts of rotten ones; while some of my neighbors who planted their potatoes on partially pulverized, and wet, heavy land, had many of theirs rot, although they had in part, the same kind of seed that I planted.

S. S. G.

Sandlake, N. Y., Nov., 1845.

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MR. EDITOR—The potato disease occupies so much of the public attention every where, that the experience and observation of individuals may lead to a solution of this mystery.

Last year we lost but few by the rot. This year but few have escaped. We have lost upwards of 1,000 bushels already. I have examined the various fields about us, and find there is little or no perceptible difference as to soil. The disease has shown itself in every variety of soil in Western New-York where the potato grows.

Still I am not discouraged, nor do I believe there is any more danger of the extinction of the species than of wheat. My own impression is that it is caused by the peculiar state of the atmosphere, and that the evil may be cured in two ways—

1. By early planting, and by using only the early varieties.
2. By cutting the stems or vines as soon as the blight or rust shows itself.

So far as my observation extends, the disease is analagous to the rust in wheat. It has been shown in a great number of cases, by actual experiment, that if wheat be cut as soon as the rust strikes the stalk, the loss is much less than when suffered to stand until it is ripe. If allowed to stand, the kernel becomes light and shrunken, yielding but little beyond bran. The disease appears in both instances in the stalk first, and the destruction of the farina in the tuber and the berry, are but the result of the destruction of the stalk by the disease. It is a species of gangrene which can only be arrested by severing the limb as soon as it appears. The remedy has been quite successful in wheat, and I have no doubt will be equally so with roots. I am the more inclined to this belief from an occurrence in my immediate vicinity. A neighbor had some potatoes planted in a very mucky piece of land, a reclaimed swamp; being in low ground an early frost killed the vines. Some of his potatoes have rotted, while those near by, but upon drier ground, and where the vines were not injured by the frost, have been seriously injured. It was not the soil, for others in like soil, but not reached by the frost, have been destroyed. Again our early potatoes which we grow in the market garden, have not been affected; and generally the early varieties have suffered the least. I can hear of none that have been diseased where the vines died before the blight struck them.

It may be that ours is only an exception; I mention the facts for the purpose of drawing out others on the same subject.

My facts are truth: my inferences may go for what they are worth. Sincerely yours,

T. C. PETERS.

Darien, N. Y., Dec. 12, 1845.

RUST ON WHEAT.

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Ed. Cultivator—Investigation would seem to have established that *Rust on Wheat* is a small plant of as regular and uniform a growth as wheat; and if such is the fact any speculation on the subject would be useless. But if so, the rapidity of its growth, visible to the naked eye, is truly astonishing, and any information concerning that growth must prove interesting to the community.

Four years ago, the writer had on his farm in Tompkins county, 15 acres of beautiful wheat. The field was the admiration of all who saw it. It stood thick on the ground, was as tall as was desirable; the heads were large and long, and it presented a rich and beautiful appearance. It then promised from 30 to 35 bushels to the acre of superior wheat. This was the first week in July. The weather then became very warm, and for three days there were frequent light showers, with bright sun-shine between them. In the language of the farmer, it was close, oppressive weather. Before the commencement of the rain, there was not the least appearance of the rust upon any of the wheat. On the contrary, it then promised one of the finest and heaviest crops ever raised in this State; but in less than four days the whole field was stricken with rust, and the result was 12 bushels to the acre of shrunken, instead of from 30 to 40 bushels of superior wheat to the acre. The land on which it was grown was a rich clay-loam, with a small portion of gravel, rather moist than otherwise.

The lot is situate near a creek of pure spring water, and during and immediately after the rain, a fog was discovered above the stream—and also above other streams in the vicinity. All the wheat growing near those streams was much injured by the rust—whereas that which grew half a mile distant from them remained uninjured. Seven acres of mine growing on new ground 150 rods from the stream, escaped entirely—but it was sheltered by woodlands on two sides, and the ground for the most part was dry.

The first crop on this 15 acres gave 28 bushels (wheat) to the acre—the second, (oats) 40—the third, (corn) 100 bushels of ears—the fourth, (oats) 40; the fifth, (wheat) after oats the same season, 20—all the finest of grain and no rust to cause injury. It was then stocked down with clover, and summer fallowed the second season for the wheat which was so seriously injured by the rust. If, as is maintained, Rust is a plant, whence came it in three days? It was not wafted by the wind, for there was none—it being remarkably calm, damp, warm and sultry, and the sun between the showers, shining intensely bright. But if it be a plant, for its growth so as to injure wheat, it requires calm, damp, warm weather, and such weather must occur when the wheat is in the milk, or the grain soft. Some of our observing farmers say that if the rain is accompaied by wind the rust does not injure the wheat.

My belief is that the rust plant or fungus, whatever it may be, always exists on the stalk of the wheat; but that its growth is not such as to injure the plant unless warm weather and moisture unite at a particular period during the growth of the plant, and that prior to that period it is not visible to the naked eye; also, that during seasons unfavorable for its production it does not attain maturity. If, for example, the grain has passed the milky state and has become in a degree hard, then the rust will not injure it in the least, however favorable the weather for its production may be.

In confirmation of this he would remark, that during the most part of July last, in this section the weather was very dry and warm. Yet about the 15th of the month, we had some wet, warm weather, and the consequence was that most of our fields of wheat were stricken with rust; but the berry was formed when the wet weather commenced, and the wheat was too far advanced to be injured—the rust proved too trifling to cause injury—the wet and warm weather was not perhaps of sufficient duration. The showers were short, and the rust did not so far progress as to stop the circulation of the sap, and the berry obtained the necessary supply.

Our crops of wheat have not been so fine for many years—the berry is large and the wheat of a superior quality. Even the late sown wheat, although affected by the rust, has escaped injury. The berry is not inferior to that sown earlier, but the yield to the acre is not so great by one-fourth. Superior cultivation and early sowing are the best preventives of the injurious effects of rust yet discovered. But the writer believes he has discovered a remedy for the rust, plant or no plant. He is preparing to make the experiment the next season, and if successful the result will be communicated.

He also believes that great crops of wheat may yet be grown as well in the counties on the Hudson as in Western New-York. We shall see.

A Farmer of Tompkins County.

THE PLUM, NECTARINE, APRICOT, AND ALMOND.

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The Plum adapts itself readily to almost any soil and situation, and will flourish any where except in a clay, marshy, or very sandy location. A rich friable soil is however to be preferred, and where not so, it should be made so by culture. The plum, nectarine, and apricot, being smooth skinned fruit, are subject to the attacks of the curculio. But if the trees are paved round as far as the branches extend, or are planted in ground that is much trodden, and thus rendered hard and impervious to the insect, or if the ground around the trees is strewed with gravel; the insect will not be able to find shelter there, and consequently the trees will be free from its depredations. The different varieties of plums used in Germany, France, and Italy, for prunes are very productive, and there would be no difficulty, if a proper locality were selected, in establishing extensive and profitable orchards for this object. The plum being exceedingly hardy would command a preference over many other fruits, which do not flourish in an equally northern climate.

The Nectarine, Apricot, and Almond, require a precisely similar soil and culture as prescribed for the peach. The nectarine is equally hardy, and the two latter equally as much so. In this latitude the apricot is most productive when placted in a location somewhat sheltered from the north and west, but many of the robust varieties exact no such precaution.

The culture of the almond could be successfully extended in the states south of the Potomac, and orchards planted there would require no more care than the peach, and would soon by their abundant crops supersede the necessity of importations of this fruit, which are made to a very large amount. Pure Americanism will always aim at the production of every article requisite to our comfort within our own national limits.

Flushing, Dec. 10, 1845. W. R. Prince.

SINGULAR CAUSE OF DEATH OF A COW.

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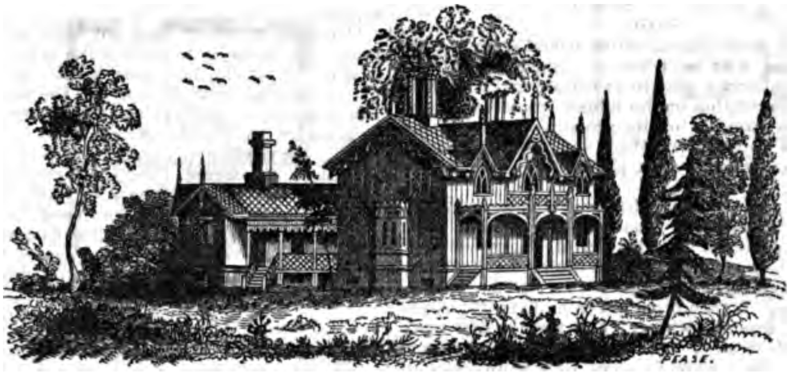
The noted Hereford cow *Matchless*, which was imported from England by Messrs. Corning and Sotham in 1840, died a few days since from a singular cause. On a post mortem examination, it was found that her death was occasioned by a portion of the skeleton of a calf which was found in the uterus. The bones consisted of several joints of the back, the sharp corners of which, by irritating the parts with which they came in contact, had brought on inflammation and mortification. She had not had a calf nor taken the bull for more than two years, and for more than a year Mr. Sotham had occasionally seen evidences of there being the remains of a calf in her. She probably, however, experienced but little inconvenience from it, till the decomposition had proceeded so far that only the fragments of the skeleton spoken of remained. From not having given milk for sometime, she had become very fat, and but for the circumstance above mentioned, would have been beef of the first quality.



ELM-WOOD COTTAGE, ROCHESTER.—(Fig 6.)

RURAL ARCHITECTURE.

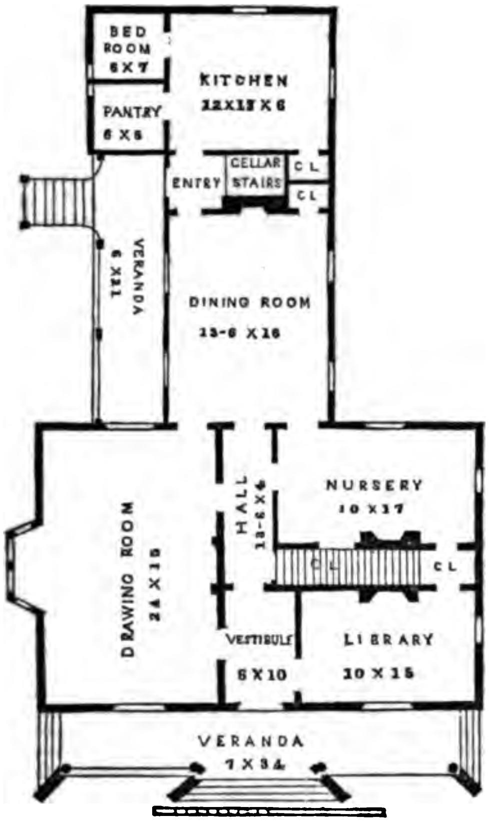
ILLUSTRATED BY PLANS OF ELMWOOD COTTAGE.

LUTHER TUCKER, ESQ.—Agreeably to request, I send you herewith the drawings, plans, &c., of a rural gothic cottage which I built at "ELMWOOD,"—(the title with which my little Rural Home Farm, on Genesee-st., Rochester, hath been dignified,) the last year. After making up my mind to build, my first aim was to get up and adopt that *style* of cottage whose *expression* should most nearly and appropriately correspond with that of the *site* upon which I was to build. My next object was to combine simple elegance, an apt expression of purpose, and utility and convenience of arrangement, with economy of expenditure. How far I have been successful in these particulars, I leave it for good judges to decide; as for myself, I see nothing, as yet, that I could wish to alter. For several years I have taken a deep and lively interest in the study of Rural Architecture, and the modes of beautifying the homes of our rural population. And although in my researches and studies on these subjects, I have consulted Loudon, and most of the standard writers, yet I have derived more interest and profit from DOWNING'S admirable works on those subjects, than from all the others together; and I would here acknowledge my indebtedness to his suggestions and illustrations, for much of the merit of the cottage plan which I here present; and likewise to the skill and taste of MERWIN AUSTIN, Esq., the accomplished architect, who has with such facility taken my own crude notions and suggestions and brought therefrom such perfect symmetry of proportions, beauty of form and elegance of expression, as the plans which he has drawn with so much taste and accuracy, most conclusively show. The spirited pencil drawing was sketched by Mr. Cleveland, an artist of promising abilities.

This cottage fronts the east—the view here given of the elevation, fig. 6, is from the south-east. It stands upon an eminence, about one hundred feet from the street, and has, as will be seen, large, fine, branching elms, and a number of towering poplars, in the back ground and at the right, which add not a little to the picturesque effect of the cottage itself. The site was chosen thus near the public road, because the ground was the highest and best suited for the purpose, and because of the fine large elms and other trees and shrubbery, which have, (the former, at least,) the advantage of a growth of some fifty years. It commands beautiful and picturesque landscape views in nearly every direction—including a fine view of a large portion of the city of Rochester, in the suburbs of which "Elmwood" is situated, a short distance west of, but in full view of the Genesee river and Mount Hope.

The *general contour* or outward expression of the cottage is, I think, in admirable keeping with the rural objects around it. I cannot better describe it than in the beautiful language of Downing, in speaking of a similar style of cottage. "It belongs to the class of neatly decorated, rural Gothic edifices, abounding in carved verge boards and pendant clustered chimney tops and irregular outlines. There is something indicating a certain license of architectural imagination, not to be precisely measured by the rule and square, or the strictly utilitarian view. Now a cottage of this class must not in any case, be erected on a bare plain, as in such a place all its picturesqueness would seem out of keeping, unmeaning and absurd. But let it be partially hidden, or half concealed by clustering foliage, and assimilated, as it were, with nature, by the interlacing and intertwining branches and boughs around it, and of which its ornaments are in some degree a repetition, and we shall feel it to be in perfect unison with its situation. Whoever has seen one of these cottages, with its rich gables breaking out from among the intricacy of tall stems and shadowy foliage, will readily confess that he has rarely beheld anything more harmonious and delightful, than the charming effect thereby produced. Some one has truly remarked, that the architecture of our dwellings is most appropriate, when it embodies and breathes forth a *home expression*, a character to which we think the rural Gothic, with its quaint, independent, comfortable, and extended air, seems fully to lay claim."

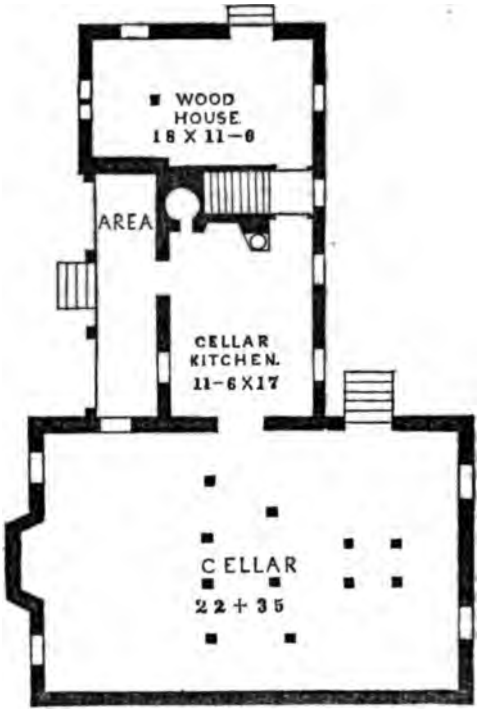
But as to *details*.—The main building is 38 feet front, by 25 feet deep, with a rear addition one story high above the basement, and 34 feet deep by 20 feet wide, (including the side verandah,) with a wash kitchen and woodhouse underneath, opening out nearly on a level with the ground, owing to the slope of the back-ground. The height of the first story in the main building is ten feet in the clear; second story, eight feet, excepting where the pitch of the roof reduces it to about six feet, only in the room from which the front gable projects, which is full height. The front verandah is about 7 by 34 feet, with steps in front and at either end, and lattice ballusters between. The vestibule is lighted by glazed panels in the front door; and light is thrown into the back hall through the glazed door between it and the vestibule, and through a like door between the hall and dining-room. The drawing-room or parlor is 15 by 24 feet in the clear, besides the bay-window, which is 2½ feet by 8, making the drawing-room 17½ feet wide across the centre; this room, and also the vestibule, are neatly corniced, and the latter has a handsome rosette, in the centre of the ceiling, from which is suspended a hall lamp. The pleasant bay-window is designed to look out upon a pretty flower-garden on the south of the house, and the view from the rear window will be most charming by converting a portion of the rear verandah (upon which it looks,) into a conservatory for plants; it will also make the view through the windows of the dining or living room, into it, very pleasing and agreeable. The neat, pleasant little library (10 by 15 feet,) is my favorite room, and may be used for a recep



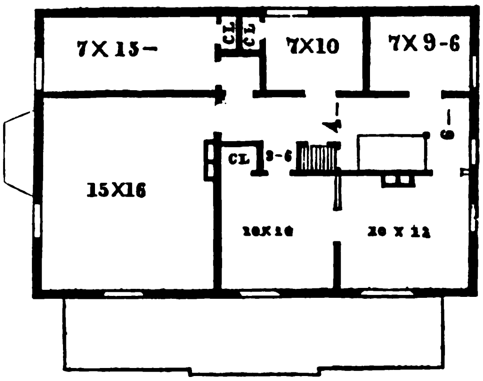
First Floor.—(*Fig* 7.)

tion or sitting room, when not needed for more secluded purposes; it has connected with it a convenient closet or recess for books or other uses. The nursery, (10 by 17 feet,) is also a convenient room, in a quiet retired portion of the house, with a large closet opening into it, under the stairs. The chamber stairs pass up between the library and nursery, with a door at the foot, and one between the hall and vestibule, so that the stairs can be made secluded for private use or accessible for more public purposes, as circumstances or convenience may require—and will answer for both front and back stairs. The doors, and all of the wood-work in the first story of the main part, and in the dining room, are painted with two good coats and then oak-grained and varnished; the window sash are grained in like manner; the balance of inside wood-work, including chambers, &c., painted three good coats. The dining or living room (13½ by 16 feet,) is connected by doors with the parlor, nursery, and hall, at one end, with a china closet at the other, and opens into an entry, from which you pass out doors, into the kitchen, or down cellar. The kitchen (12 by 13½ feet,) is separated from the dining-room by two doors, in order to prevent the steam and unpleasant odors of the cooking operations from penetrating other portions of the house. The kitchen has connected with it, a china closet, pantry, and servant's bed-room. The chamber over the front part, it will be seen, contains six very pretty bed-rooms, with suitable closets, steps to the attic, &c. All the inside walls and ceilings plastered with handsome hard-finish; and the casings, doors, &c., finished in the appropriate gothic style.

The outside is covered with sheathing of pine boards, one inch thick and ten inches wide, tongue-and-grooved together, and nailed vertically to the frame, and the joints covered by strips or battens, three inches wide. In speaking of this kind of covering, Mr. Downing says;—"We suggest this mode as a variation, as it makes a very warm and dry house, and the effect is good." The outside is painted three coats, of a mellow shade, and smalted with best lake sand.—The cluster chimney-tops are constructed of bricks moulded into shape for the purpose. The glass in the windows are cut diamonding. The large gothic window in the front gable opens down to the floor, through which you pass out of the chamber on to the balcony over the porch to the front door.



Basement.—(*Fig.* 8.)



Chambers.—(*Fig.* 9.)

I have been thus minute in giving the details, so that any one can judge of the style of finish and convenience of arrangement which may be obtained at a comparative small price. The whole expense does not exceed $2,500, including a hot-air furnace, which costs about $150. I contracted to have every thing finished complete for something less than the first sum.

Yours with respect, Thos. H. Hyatt.

Rochester, Nov., 1845.

Preserving Eggs.—A pint of lime and a pint of salt, mixed with a pail of water, is said to preserve eggs for any reasonable time.

MR. QUINCY'S ADDRESS.

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We invite a perusal of the following address delivered at the annual exhibition of the N. Y. State Agricultural Society at Utica, in September last, by Hon. Josiah Quincy, Jr. It truly speaks "in thoughts that breathe and words that burn;" and we feel confident that no one will rise from its perusal without being made "wiser and better." We esteem it a *New Year's Gift* of great value, and which, unlike many new-year books, may be profitably read at all seasons of the year.

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Mr. President and Gentlemen of the N. Y. S. Ag. Society:

If there were any spot that would of itself inspire a man with eloquence on the subject of agriculture, it is the one we now occupy. We stand in the center of the agricultural district of the great state of the Union. In full view the lovely valley of the Mohawk, famous in history and celebrated in song, stretches away to the distance. Before us, by thousands and tens of thousands, stand the men who have felled its forests and caused it to blossom like the rose. Around us are the proofs of the skill and intelligence that have characterised their labors. Beneath us is the soil from whose maternal bosom we draw our subsistence. Above us is the canopy of Heaven that stretches equally over all.

We stand in the great temple dedicated to agriculture—a temple, at the raising of whose columns the "morning stars sang together and all the sons of God shouted for joy"—a temple, not made with hands, eternal as the Heavens.

But, alas! Mr. President, the age of inspiration is passed, and I never felt a stronger desire to ask the kind consideration of an audience, than when, under rather unusual circumstances, I now rise to address you. The exhibitions of agricultural skill and agricultural success, which we have witnessed on this occasion, have impressed the truth most deeply upon my mind that it was hardly worth while for the New-York State Agricultural Society to send all the way to Boston, to get me to instruct the New-York farmers in the management of their farms. If I indulged any hopes that the agricultural knowledge conveyed in this address would cause two blades of grass to grow where but one grew before, those hopes are dissipated. And to prevent any disappointment, I would assure the audience, that as to flocks and dairies, the raising of cattle and the cultivation of corn, they must go on in the old fashioned way for anything I have to say to the contrary. But there are other subjects of interest connected with agriculture, and no one can look around upon this assembly without feeling that the Farmer is of more importance than his farm; and the results of the occupation on his character, than any of its more material products.

The relative position of the American farmer possesses a deep interest to individuals and the community. To individuals, as it may decide the wavering as to the course they should pursue, or render them contented with the one they have adopted; to the public, for everything that tends to elevate the agricultural class, is of the first importance to the state.

What then is the position of the American farmer when compared with that of the merchant, the politician, the lawyer? Should he be content with his lot for himself and his children? Or should he leave his occupation and adopt some other? Like every other position, that of the farmer has its dark side as well as its bright one. And to decide on its comparative advantages, we must inquire what is the object of man's existence, and how shall he attain the end of his being?

To these questions, history and revelation, the world around and the spirit within us, answer, that the object of man's existence is happiness. Happiness here, and happiness forever. And the condition of that happiness is the diligent and proper exercise of his affections and his faculties. If this be the case, does the situation of an American farmer offer a fair opportunity of insuring his happiness?

If happiness is the object of life, and all that the world can give towards it, is health and competence. "Health of body is above all riches, and a strong body above infinite wealth." And where is health to be found? There is no need of an audible answer. Look around. Bright eyes and blooming cheeks, as well as strong arms and untiring strength, tell us that earth's first blessing is bestowed upon those who labor upon her bosom.

But health is often undervalued by its possessor, or only appreciated when lost. Wealth, the more obvious and immediate reward of labor, is the chief pursuit of the active. And here the farmer thinks he has a right to complain. The merchant will sometimes make more in a year than he can in a lifetime; and it is not wonderful that he sometimes asks, would it not be better to leave small rewards, though regular and certain, for the chance of obtaining greater? To decide this question, we must ask—What is the price he pays? What is the reward he obtains?

What is the price he pays? To say nothing of his moral exposures, in the great majority of cases, health of body and serenity of mind. Follow such a one into the crowded streets, or the close workshop. His strength for a time sustains him, but confinement and bad air soon deprive him of his healthful energy, and disease and premature decay become too often his portion. But supposing health can be preserved, where is his serenity of mind?

The risks attendant on rapid accumulation are always in proportion to the chances of success. The farmer sows his seed, and has no doubt but that the harvest will repay him. But he who embarks in speculations that promise sudden and great wealth, knows that he may be "sowing the wind, to reap the whirlwind." And the constant fear of such a result, embitters his days and renders his nights restless. And if attained, success gives but little satisfaction. The higher the rise, the wider the horizon; the greater the accumulation, the more exorbitant the desire. And this is not the extent of the evil. A total want of independence is too often the result. Few men in our community have those resources that will enable them to carry on extensive operations on their own means. Almost all depend upon borrowing, and "the borrower is a servant unto the lender." But even if success should be the portion of the aspirant for riches, when is he to attain to it? Does it come forward to meet him? Years of anxiety may be repaid by wealth; but how seldom is this the case. More than ninety in every hundred, even in regular mercantile pursuits, fail. There are but few capital prizes in this lottery. The name of the fortunate holder may be seen at every corner, but where are the ninety and nine who draw blanks? And if attained, how uncertain is its possession! Wealth "gotten by vanity," (by which, I suppose, Solomon meant speculation,) "shall be diminished, but he that gathereth by labor shall increase," is a doctrine as true now as when first delivered; and is one which the experience of every age tends to corroborate.

And after all, what is the advantage of great wealth, or, what is great wealth itself? It exists only in comparison. "A man is as well off," said the great capitalist of the United States, "who is worth half a million of dollars, as he would be if he were rich." And one of the satirical papers of the day tells us, that when Baron Rothschild, the Jewish banker, read that the income of Louis Phillippe, was only fifty dollars a minute, his eyes filled with tears; for he was not aware of the existence of such destitution. After the comforts of life are supplied, wealth becomes merely an imaginary advantage, and its possession does not confer any material for happiness, which an industrious and forehanded farmer does not possess. "We will conquer all Italy," said Pyrrhus, to his prime minister, "and then we will pass into Asia; we will overrun her kingdoms, and then we will wage war upon Africa; and when we have conquered all, we will sit down quietly and enjoy ourselves." "And why," replied his minister, "should we not sit down and enjoy ourselves without taking all his trouble?" And why may not you, it may be said to many an aspirant after wealth, enjoy in reality all you seek, in your present condition?

“Give me neither poverty nor riches,” was the prayer of one of the sages of antiquity. And Lord Bacon, the wisest man of modern times, says, “seek not proud riches, but rather such as thou mayest get justly, use soberly, distribute cheerfully and leave contentedly.” And can there be a truer description of a farmer's fortune? There is no greater independence than that possessed by a contented fore-handed farmer. “Tell your master,” said a Roman general, to the ambassador of the king of Persia, who came to bribe him with great wealth, and found him washing the vegetables that were to constitute his dinner with his own hands, “tell your master that all the gold in Persia, can never bribe the man who can contentedly live upon turneps.”

And the answer was as true in philosophy, as it was elevated in patriotism. To be happy, man must limit his desires. And when he has sufficient for his needs, should remember that the temptations and perplexities incident to overgrown wealth, more than counterbalance its seeming advantages. Health of body and competence of estate are all the requisites for organic happiness that the world can bestow. And to say that agricultural pursuits are eminently calculated to insure these, is only to reiterate the language of past ages, and to repeat the testimony of our own. If you leave such pursuits, the hazard increases as the profit augments. The amount of the premium is always proportioned to the greatness of the risk.

But health and the conveniences of life are not all that a man requires to make him happy. He desires to be useful, he wishes to be esteemed. And what profession can boast of a higher claim to utility than that of the farmer? The greater part of mankind must be agriculturists, and on their character the well-being of every state must depend. Our free institutions are valued, but how shall they be preserved? By the virtue of the people. History gives no other answer. No truth is more clearly emblazoned on her pages than that if a nation would be free, they must be intelligently virtuous. And here the agricultural class become of the first importance to the state. The influence of a virtuous yeomanry on her character, like that of the air on the individual, are seen in the strength of those who are unconscious of its presence.

But they have still a further power. If, “when the righteous are in authority, the people rejoice,” they who by their numbers hold the gift of office, have an influence second to none in the republic.

The political influence of the agricultural class, is an important but a dangerous topic before an audience like the present, as particular applications may be made of general observations. To prevent such a consequence, I would illustrate my meaning by reference to the oldest political disquisition in existence, which is remarkable as showing the similarity of political aspirants in all ages; and which, as it was written two thousand years before the discovery of this continent, can hardly be supposed to refer either to the advocates of Texas or the tariff.

It is more than three thousand years since Jotham called to the men of Shechem, to listen to a parable: “The trees of the forest went out to choose a king over them; and they said unto the olive tree, ‘reign thou over us.’” The answer shows who was meant by the olive. “Should I leave my fatness wherewith by me they honor God and man, and go to be promoted over the trees?” It was the answer of a religious and conscientious man, who feared that public station would not be favorable to the virtues which were the objects of his life.

“And the trees said to the fig tree, come thou and reign over us; and the fig tree answered, should I forsake my sweetness and my good fruit, and go to be promoted over the trees?” Could a better personification have been found of a close, calculating man, who looked out for the main chance, and took special care of number one? It was his own sweetness and good fruit that influenced his decision. The emoluments of office such a one knew were small and precarious; and as for honors he would not give a fig for the whole of them.

“Then said the trees to the vine, come thou and reign over us.” The vine was one of your popular fellows who can take hold of any thing to help himself up; who is always on the fence, when nothing higher offers, and who, too pliant to stand alone, will run well if properly supported. But his vocation was “to cheer the hearts of gods and men,” and as office-holding and popularity did not agree very well together, he declined the honor.

“Then said all the trees to the bramble, come thou and reign over us.” There were two reasons why this call alone was unanimous. He had nothing particularly to do, and he kept himself perpetually before the public. He had nothing particularly to do, he had neither wine nor oil, beauty nor sweets to recommend him. He was a fit representative of a class who then existed. Nobody could tell what they were made for, and nobody could divine what they followed for a living. But yet the bramble was not one to be forgotten. He was always before the public. He planted himself by the wayside, and caught hold of everybody that passed; there was no getting along for the bramble; and it may be that they made him king, on the same principle that young ladies sometimes marry an importunate lover—to get rid of him. And how did the bramble receive his nomination? Did he distrust his powers or decline the office? Oh no! He was up for everything, and up to anything. He could not boast much of himself, so he strove to magnify his office. “And the bramble said, if, in truth, ye anoint me king over you, then come and put your trust in my shadow; if not, then let a fire come out of the bramble and devour the cedars of Lebanon.”

Such was the opinion of Jotham, three thousand years ago, on the probable feelings and conduct of rulers who were placed in authority without the requisites for office. He believed that a fire would go out of the bramble to destroy the noblest and most elevated in the land. By the bramble he meant Abimelech, who was elected king of Shechem, because his mother was a native of the city. His course was as Jotham had foretold; a fire did go out of the bramble. He slew three score and ten men of his brethren on one stone. And as for Shechem, he took occasion of their revolt, and put every man, woman and child to the sword, burned the city with fire, sowed it with salt, and left a warning to future ages, of the danger of putting, through folly or affection, improper men into office.

If now, as formerly, the prosperity of the state is so intimately connected with the character of the rulers, how great is the power, and how evident the duty of a class of men, who removed from the immediate struggle, hold, by their numbers, the gift of office. If, they are faithful, our republic will have a stability that no one before it has possessed. If, doubting their importance, they neglect the trust committed to them, they may learn, too late, that they have sold their country's birthright; and when they would recall the blessing of their fathers, they may find there is no place for repentance, though they seek it diligently and with tears.

But perhaps it will be said that the agricultural class, though collectively powerful, are individually of small comparative importance. Together they may be likened to the ocean that supports a nation's navy and tosses it from its bosom, with as much ease as it wafts a feather. Still the individual is but a drop, resembling others so nearly as to attract neither notice nor admiration. But this is not peculiar to this class. It applies equally to all. Few, from the very definition, can be distinguished.

But of all the professions, it appears to me that the farmers are the last who ought to complain that, as a class, they do not receive a full proportion of the honors of the republic. Our chief magistrates have differed in many points, but they have generally agreed in this; that before, and in many cases after the election they have been farmers. There was the farmer of Mount-Vernon, and the farmer of Monticello; the far mer of the North-Bend, and the farmer of the Hermitage; the farmer of Tennessee and the farmer of Ashland; the farmer of Lindenwald and the farmer of Marshfield. So that it well may be urged, that though all the farmers can't be presidents, all the presidents must be farmers.

But besides this there are in agricultural life great opportunities of individual usefulness. The effects of example and precept extend farther than we can imagine. When you throw wheat into the ground, you know what will be the product; but when you exemplify or inculcate a moral truth, eternity alone can develop the extent of the blessing.

About a hundred years ago there lived in Boston a tallow-chandler. He was too ignorant to give and too poor to pay for his children's instruction, but he was a wise and an honest man, and there was one book, upon whose precepts he relied, as being able to instruct his children how to live prosperously in this world, as well as to prepare them for another. We are told that he daily repeated to them this proverb: "Seest thou a man diligent in his business? He shall stand before kings." In process of time this tallow-chandler died and was forgotten. But the good seed had fallen upon good ground. One of his little boys obeyed his father's instruction; he was diligent in his business, and he did stand before kings, the first representative of his native land! He lived as a philosopher, to snatch the lightning from heaven; as a statesman, to wrest the sceptre from tyrants. And when he died, he confessed that it was the moral teachings of his father, added to the little learning he picked up in a town school at Boston, to which he owed his success, his happiness and his reputation. He did what he could to testify how sensible he was of these obligations. He bequeathed liberally to his native city, the means of inducing the young to improve their advantages, and to enable the industrious to succeed in their callings. And he erected a monument over his father to tell his virtues to another age. But the glory of the father was in the child. His son's character was his noblest monument. The examples that son set, of industry, perseverance and economy, have excited and are exciting many to imitate them. And thousands, yet unborn, may owe their success and happiness to the manner in which a text was enforced, by a poor tallow-chandler, upon Benjamin Franklin.

But, being useful and profitable to others, is not the only advantage of a farmer's life. He who is wise may be profitable to himself. In the most busy agricultural life, there are hours that can be devoted to intellectual improvement. And I confess, in my ideal of the American farmer, much more is included than the regular, systematic performance of the routine of plowing and sowing, reaping and gathering into barns.

I cannot satisfy my imagination with the hard working man, who, after toiling through the day, has no thought at its close, but to satisfy his animal nature and to sleep. No, the man who cannot find some time for the cultivation of his intellect, is in a wrong position; and does not improve as he might the situation in which he is placed. This it is, that spiritualizes his labor and raises him above the brute that labors for him. I do not expect him to be learned on subjects for which he has no occasion; but if he enjoys the priceless boon of health, let him know something of that most wonderful instrument, his own body,—that if that "harp of thousand strings" should fail, he may with some intelligence repair the evil. Let him know something of the physiology of the vegetable world; and every blade of grass and ear of corn will speak to him of the benevolence and skill of the Great Contriver. Let him not enjoy the sunshine without some knowledge of the laws of light, or see his field drinking in the dew, without understanding its adaptation to the purposes of nutrition. It is in the power of every man to reserve some portion of his time for these pursuits; and he will find that every addition to his stock of knowledge will make his walks the pleasanter, the [illegible] the [illegible], and every thing more full of inte- [illegible]

But there is something superior to intellectual pleasure; and can a sphere be better adapted to a progress in the moral qualities than the one he occupies? Every situation must be a scene of trial. Yet different states have different temptations. The difficulty of entering the narrow path, is not, in every case, likened to the passing of a camel through a needle's eye. Agricultural life has few temptations—no risks are run in its pursuit—no deception is used in its progress—no concealment is required for its success—it is open, manly, straight-forward. It depends on no one's favor; it rests on no one's promise, excepting His, who has said, that "while the world endureth, seed time and harvest, summer and winter, shall not cease." And while free from tempation, such a life gives ample scope for the exercise of all those duties that elevate man, while benefiting his race. It is not required of many men in a generation to do some great thing for themselves or for their country. It is the little every day duties and habits that mark the character. It was not in the shouts of multitudes, that the old patriarchal farmer delighted. But it was "when the eye saw him, then it blessed him; and when the ear heard him, then it bore witness of him." The opportunities of exercising the elevated virtues are ever present to the independent farmer. Like the patriarchs of old he stands at the head of his family. Like them, he should rule his household after him,—instructing, consoling, supporting.

And there are others dependent upon him, who owe their comfort and well-being to his care; and whose dependence may be the means of awakening sentiments, that even religion has not overlooked. When the great lawgiver of the Jews led them from the house of bondage, and by divine command established them as an agricultural people, his laws recognized the advantages of such a life for the formation of character. To remember and love the Giver, and rejoice before Him, in the spring-time and in the harvest, on the anniversary of their deliverance and on festal days, was the first and great commandment, and the second was like unto it. Love and kindness to the neighbor, to the stranger, to the widow, to the fatherless, were enjoined as congenial duties. But the directions stopped not here. The brute creation of every kind shared in his remembrance. The Sabbath was to be observed, "that thy ox and thy ass may rest." And when the harvest was gathered in, the mute and patient laborer was not to be forgotten: he should share the grain for which he had toiled, and the command, "thou shalt not muzzle thy ox when he treadeth out the corn," secured to him at least a portion.

But freedom from temptations, and opportunities of exercising the virtues, are not the only facilities that an agricultural life offers for the formation of an elevated character. The scenes that surround it, the unceasing regularity of cold and heat, summer and winter, seedtime and harvest, cannot but lead the observing mind up to their Author. In no crowded workshop his time is spent. The broad fields and the high mountains, and the running streams, diffuse health and cheerfulness around. No smoky lamp sheds a doubtful glimmer over his task; the glorious sun sends his rays for millions of miles to warm, and enlighten, and gladden his path. The religious sentiment is nowhere so naturally developed as among rural scenery. How great is the charm that agricultural allusions throw over sacred poetry! It was a youth spent in rural scenes, that enabled the sweet singer of Israel to touch a chord, responsive to every human heart.

The voice of the son of Jesse is always sweet, but how different its tones from the various situations of his eventful life. The shepherd-boy, keeping his father's sheep, is filled with adoration as he gazes on the majestic scene above, and exclaims, "what is man that thou art mindful of him, or the son of man that thou visitest him?" Or, rapt with love at the care of the Creator, reminding him of that which he himself exercised towards the objects of his charge, he bursts out, "the Lord is my shepherd, I shall not want." His voice, too, comes to us from the palace and the camp; from the statesman and the warrior; but in a tone how altered. The innocence and faith of the shepherd-boy.

have not preserved him in more trying scenes. The wailing of the adulterer and the murderer; the prayer for deliverance from blood and guiltiness; the remorse, the despair of conscience, are there. And well may he exclaim, as he looks back upon his early days and his later career, "Oh! had I wings like a dove, then would I fly away and be at rest."

But some one, smarting under ills that are common to every lot, may say, "in description a farmer's life may be poetic and delightful; but we want to be rich; we want to be powerful; we want to look down upon others. That is happiness; that is the usefulness to which we aspire. I am ambitious, and avaricious and envious. I have no scope here: I can never be happy as a farmer." And in what position can you be happy? Where do these feelings produce aught but misery? An ambitious, avaricious, envious farmer cannot be happy on his farm, for it is a law of man's nature that no outward situation shall satisfy a disordered mind. And of agricultural pursuits no more can be said than is alleged of godliness by the apostle, "with contentment, it is great gain."

What, then, is the conclusion of this whole matter? The agricultural life is one eminently calculated for human happiness and human virtue. But let no other calling or pursuit of honest industry, be despised or envied. One cannot say unto another, "I have no need of thee;" and to every one there are compensations made that render all, in a great degree, satisfied with their lot. Envy not the wealth of the merchant; it has been won by anxieties that you never knew, and is held by so frail a tenure as to deprive its possessor of perfect security and perfect peace. While your slumbers have been sound, his have been disturbed by calculating chances, by fearful anticipations, by uncertainty of results. The reward of your labor is sure. He feels that an hour may strip him of his possessions, and turn him and his family on the world in debt and penury.

Envy not the learning of the student. The hue on his cheek testifies of the vigils by which it has been attained. He has grown pale over the midnight lamp. He has been shut up from the prospect of nature, while sound sleep and refreshing breezes have been your portion and your health.

Envy not the successful statesman. His name may be in every one's mouth. His reputation may be the property of his country; but envy and detraction have marked him. His plans are thwarted, his principles attacked, his ends misrepresented. And if he attain to the highest station, it is to feel that his power only enables him to make one ungrateful, and hundreds his enemies, for every favor he can bestow.

Envy no one. The situation of an independent farmer stands among the first, for happiness and virtue. It is the one to which statesmen and warriors have retired, to find, in the contemplation of the works of nature, that serenity which more conspicuous situations could not impart. It is the situation in which God placed his peculiar people in the land of Judea, and to which all the laws and institutions of his great lawgiver had immediate reference. And, when in fullness of time, the privileges of the chosen seed, were to be extended to all his children, it was to shepherds, abiding in the field, that the glad tidings of great joy were first announced. Health of body, serenity of mind and competence of estate, wait upon this honorable calling; and in giving these, it gives all that the present life can bestow, while it opens, through its influence, the path to Heaven.

CULTURE OF MUSTARD.

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Some months since we noticed the sale of a lot of superior mustard raised by Rev. J. H. Parmelee, of Duncan's Falls, Ohio. The average of Mr. P.'s crop of 27 acres for 1844 was about 14 bushels per acre, for which he got eight cents per lb. in Philadelphia. The announcement of his success, stimulated many to go into the culture of mustard this season; but from the unfavorableness of the season and the lower price obtained in market, the profits seem not to have been generally very flattering. In the *Zanesville Gazette* Mr. Parmelee gives an account of his mustard crop for 1845. He planted 28 acres with brown and 2 acres with white mustard seed. Of the former, the yield was 305 bushels, and of the latter 15 bushels—in all 320 bushels from 30 acres. The expense of the crop, delivered in New-York, was $1089. For 289 bushels Mr. P. received $1117. A great influx of foreign seed, mostly of superior quality, obliged Mr. P. to submit to a reduction of one cent per pound from the price obtained in 1844. There was no demand for the white mustard seed—a lot of the best quality from the northern part of New-York, could not be sold for five cents per pound, which would be only $2.50 per bushel. Mr. P. remarks in conclusion, that he thinks a judicious expenditure of labor in the culture of wheat, would yield a better compensation than was afforded by the mustard.

ROSE-BUGS—USEFULNESS OF TOADS.

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The July number of the Cultivator says that we find no other accounts (than the one alluded to,) "of the rose-bug having attacked the grape vine." H. W. S. C. refers in the Aug. number, to Dr. Underhill's remedy of "going over the vines every morning and brushing the bugs into cups of water. In the hurry of the farm, this would be tedious, and would encroach materially upon other business; for it must be repeated daily and continually during the day, for about three weeks. In my case too, basins would have been filled instead of cups.

Some years ago I had a large collection of roses, the bloom of which I could never enjoy from the myriads of Rose-bugs, in my garden. They devoured the flowers the instant the petals expanded, and most of them while yet in the bud. I have taken more than 50 bugs from one single flower, and every flower on every bush was alike covered with the same pest. I was completely discouraged, and had determined upon giving up the cultivation of roses. I had also imported twenty different kinds of grapes, which grew beautifully, and I was already in imagination, feasting on their branches, but, alas! "L'homme propose, et Dieu dispose"—Holla! a farmer quoting French, exclaims some *professional gentleman!* And why not? Why should'nt a farmer quote, or understand French, or Latin, or even Greek? Agriculture and Horticulture both are strictly scientific pursuits, and the more enlightened a farmer's mind, the more cultivated his intellect, the greater prosperity he will attain. However, "revenons à nos moutons," as the French client said to his lawyer. My vines were all destroyed by the voracious rose-bugs.

I had a sun-dial in my garden, and I went one day to ascertain the hour. There was a very fine Blush Belgic rose, close to the dial; and while regarding the latter, I heard a click or noise resembling, though much fainter, the cocking of a small pistol. I listened and heard it again. The sound attracted my attention towards an aldermanic toad, who was, as Virgil has it, "*patulæ recumbans sub tegmine fagi*"—no, not fagi, but rosæ. I watched, and discovered that the click proceeded from him. He was glutting himself on the rose-bugs, as they dropped near from the bush. I procured a handful, and threw them one by one towards him; not one of which he missed. The insects were seized by his long tongue with such velocity that I could scarcely see it although the tongue was ejected several inches; the noise was occasioned either by the opening or shutting of the mouth, I could not discover which, Unfortunately I am no entomlogist, or zoologist. But I called my better half, for all farmers should be married, and we fed our friend, the toad, for some time; the way he gorged himself, certainly astonished me. I now "spare the" toads, but not the "birds." To curtail, however, a long, and perhaps, to others an uninteresting rigmarole, I instantly offered some boys in the neighborhood a premium on toads, and placed them in my garden, where I have a number still luxuriating in an "otium cum dignitate." To them alone I attribute that my roses now exhibit their beauty, and my grape-vines their fruit.

My observation also goes to prove, with Dr. Underhill, that rose-bugs breed in the ground. This insect came into my garden with some rose bushes from a New-York nursery. C. E.

Sandwich, C. W., 1845.

EXPERIMENTS IN GROWING INDIAN CORN.

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ED. CULTIVATOR—One and a half miles north of this village, is an extensive black ash swamp, three miles east and west, averaging three-fourths of a mile in width. Three years ago, a road was made across the width of this swamp, by laying logs crosswise compactly together, and covering them with muck taken from ditches, cut three feet deep on each side of this causeway. Judge Clark and other proprietors of this swamp, cut a ditch six feet wide at top and three deep, connecting with the ditches of this road, running east 1¼ miles to the termination of the swamp at Black Brook. This season Judge Clark tried the experiment of growing Indian corn on a field of 1¼ acres, directly at the junction of the road and the main ditch. The black ash and elm trees had been cut off three years; a few turneps were grown on it the first season; last season a crop of potatoes, which were much injured by the rot. It was now plowed once as well as the stumpy incumbered ground would admit, and planted immediately after it was plowed, 24th May, with Dutton corn in hills three feet each way. Some practical farmers predicted that if the season was wet, "the crop would be drowned"—if dry, "the muck would dry up and the corn wither." I went over the field early one morning after the second hoeing, and the ears had commenced forming, in the height of the great drouth of the past summer. Instead of finding the soil dry and thirsty, the whole loose peaty mass was redolent of moisture. It appeared to me that during the past very warm night, the hydrogen of the decomposed surface had united with the oxygen of the air, thus forming water, by a sort of capillary attraction, not less than by chemical affinity. Had the surface soil been less porous the union of the two gases could not have taken place, at least to the same extent. Had not the peaty surface been in a fine state of decomposition, the like result would not have been produced, the corn would have been slender, the leaves curled, the *farmers' prediction fulfilled.* Had it been a wet season the ditches would, by taking off the surplus water, have prevented the "drowning" of the corn; but the decomposition of the peaty mass would have been so much retarded, by the absence of solar heat, that the farmers' prediction would have been, in effect, fulfilled; less however from the effect of the incumbent water than from the lack of solar heat. The surface soil of this swamp is nearly four feet deep, resting upon a compact silicious clay, of a light grey color; this corn yielded 140 bushels of sound ears to the acre, with two hoeings.

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EFFECTS OF DROUTH—CARROTS.

It is a common saying among farmers, that in a dry eason the soil will suffer the drouth better without nanure than with it. This assertion can only be true vhen the manure is slovenly applied, in a crude and ndecomposed state. I have noticed that leguminous lants grown the past unusually dry season, have had a nuch shorter tap root than those grown in ordinary easons. I gathered white carrots this fall with the greatest ease by hand, without fork or spade; many of he tap roots were rounded off four or five inches below he surface, but the lateral roots were many and long; ne carrots high out of the ground, many of them three nches in diameter, by twelve in length. I attribute he phenomena of the rounded tap root to the extreme routh of the season; in default of a moist sub-soil, the lant sends its roots laterally to drink the water artificially supplied by the chemical union of the hydrogen of the humus in the soil with the oxogen of the air. Petzholdt says that the formation of carbonic acid takes place principally at the expense of the oxygen of decaying matter—and that the hydrogen from the same matter forms water by like union with the oxygen of the atmosphere. Liebig says that the quantity of water produced by an acre of fresh plowed sward ground amounts to 950 lbs. per hour, which equals the evaporation per hour from an acre after copious rains. The results in vegetable growth the past unusually warm dry summer, go far to corroborate the truth of the above views. How else are we to account for the unusual large crops produced this season from every well worked field, while the meadow and pasture lands have suffered severely from drouth.

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SALT AS A MANURE.

E. H. Bartlett, on the east shore of Seneca Lake, in the town of Romulus, has this year tried the experiment of watering his flax field with a weak brine, soon after the seed was sown. The result was that the bolls of the flax thus treated, contained from 9 to 13 seeds—the unsalted 5 to 8. The drouth of the season undoubtedly contributed to this result. A compost of salt, ashes and chamberlie, has also proved this season to be an antidote to the turnep worm, so common to old soils.

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INDIAN CORN FOR FODDER.

Mr. B. planted an acre of corn for fodder, 18 inches a part one way, 12 the other, three kernels to the hill. He got five tons of well cured edible stalks, and fifty-four bushels of ears from the acre; the land was never manured; it was a clay loam interspersed with granitic boulders and quartz and limestone pebbles.

5 tons stalks worth this year $7 per ton,......	$35.00
54 bushels ears of 8 rowed corn, at 25 cts.,....	13.50
	$48.50
Deduct cost 1 bushel seed, planting, hoeing, cutting up, husking, stacking stalks and use of land,	17.44
Nett profit,......................	$31.06

Mr. B. also grew 40 bushels good spring wheat of the Labrador variety to the acre this season; it was sown in March as soon as the frost was out of the ground. S. W.

Waterloo, Seneca Co., N. Y., Dec., 1845.

OPERATION OF GYPSUM.

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Liebig supposes the action of gypsum to result from its attraction of ammonia from the atmosphere—the ammonia supplying plants to which the gypsum had been applied, with nitrogen. It is difficult, however, to account for all the results of gypsum on this theory. For instance, its effects have been seen on clover and potatoes, on the same fields where its application to wheat and other grains, (the very plants requiring most nitrogen,) produced no visible results. We have seen it applied on an argillaceous soil at the foot of a granitic hill with great benefits, when the same kind of gypsum applied at the same time to the same kind of crops, on the sides of the hill, produced no effect.

But whatever may be the principle on which plaster operates, its effects in many cases are wonderful. When in Connecticut last summer, we saw, on the farm of John Boyd, Esq., of Winchester, a striking instance of the effects of plaster on potatoes. Four rows of potatoes, to which a spoonful of plaster had been applied, were at least one-third more forward in their size and hight of the tops, and were also a much darker green, than others in the same field. The plastered rows were in the middle of the field, and excepting the plaster, had been treated exactly like the others. What the difference might have been in the *yield* of the plastered and unplastered rows, we have no means of knowing.

Mr. Chauncey Chapin, of Springfield, Mass., also showed us last summer, a part of his farm which has been mowed annually for fifty years, yielding on an average three tons per acre, (cut twice in a season,) and had received no other dressing during that time than two bushels of plaster per acre each year—one bushel being sown in the spring and the other in August. The soil seemed to be quite a stiff clay—too stiff for cultivation. It is a stratum which crops out in many places on the bank or terrace which divides the alluvion of the Connecticut river from the sandy plain east of Springfield. The effect of plaster on some other parts of Mr. Chapin's farm, is favorable, but nowhere so remarkable as on the soil mentioned. This case, and many others which might be cited, indicates that the effect of plaster is much effected by the nature of the soil on which it is applied. Perhaps there is no better way for the farmer to ascertain whether plaster can be profitably used, than to first try it in different ways, but in such an exact manner that its effect may be easily known. An experiment which would involve no risk or expense, to any extent, might settle points of great consequence.

A MISSISSIPPI PLANTATION.

FROM the last number of our traveling correspondent's "Notes in the Southwest," we give the following account of his visit to Col. J. DUNBAR, who has one of the best plantations in that state, situate in Jefferson county, 16 miles east of Natchez. Mr. Robinson says:

He is a very fine hearty man, 61 years old, and was born near Natchez, and came upon the place where he lives now, when the whole country was covered so thick with cane that it was almost impossible to get through it, and commenced with his own hands to clear away a little spot upon which to build his cabin. He was then possessed of a good strong pair of hands, and a wife willing and able to assist him. He has both yet; and he also has upon the "home plantation," 600 acres in cultivation, and works 50 field-hands, and 40 horses and mules, and ten yoke of oxen. He also has two blacksmiths constantly at work, as well as carpenters, wagon and plowmakers, shoemakers, &c.

The whole number of negroes upon the plantation exceeds 150, having several supernumerary, old and young, from another plantation that he owns.

He has about an hundred head of horses and mules, among which are some very fine blooded animals, particularly three breeding mares. He has also a noble jack, 14 hands high, and heavy built. His cattle are not only uncounted, but unaccountable fine—having among them, both Durhams and Ayrshires of good quality. He has a good flock of sheep, and has kept them for 30 years or more, without perceiving any unhealthiness or deterioration. He has now both South Down and Bakewell rams which he bought for full bloods, but in which I think he was cheated, but not by a Yankee.

He also has, he dont know how many hogs, and I am sure I dont; but he raises corn enough "to do him," and make pork enough to supply the plantation, and every year has some bacon and lard to sell. He also raises large quantities of oats, peas and potatoes, and some as good tobacco from Havanna seed, as ever the lover of a good cigar or long stem pipe, puffed into sweet perfume. He cultivates winter oats, clover, Bermuda, blue-grass and rye for pasture, and all of his stock look as though they knew it. The land is very hilly, and was once covered entirely with cane and a growth of white, black and water oak, poplar, ash, hickory, black walnut, dogwood, sassafras, holly, beach, magnolia.

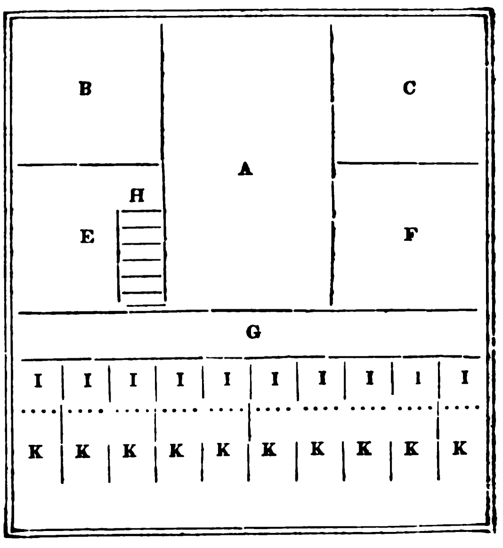
Col. D. has a steam saw-mill, and he assures me that he saved more than the cost of it, in getting lumber for his own buildings. No wonder, for he has a small world of them. His "negro quarters" look like a neat New-England village; and the interior of the dwellings has as much the air of comfort as the exterior. The negroes' food is all cooked in a very large and neat kitchen, immediately under the eye of overseers or owner. There is a large, airy, and excellent building for a hospital. It is also used for the "Christmas Ball" which he gives his negroes every year, accompanied with a feast that many a white man would be glad of a chance to partake of. It is generally contrived to have a few pair of weddings on hand at the same time. Births appear to be "in order" at all seasons.

He has a large fine house, and beautiful garden, and good assortment of fruit and flowers, for which the good taste and judicious management of one of the best housewives in Mississippi must have the credit. I was pleased to see Mrs. D. take pride in showing us her neat dairy room, and long row of barrels of the sweetest lard, besides tallow, and two year old soap; all prepared and put up under her own personal superintendence—and this in Mississippi too—by the wife of a planter worth—well I don't know how much money, but this I do know, that him and his good wife are worth a most comfortable and cheerful disposition that makes all happy around them, and if they have not quiet consciences, I don't know who can have them. Unfortunately they have not a child in the world: but I dare say they won't lack heirs.

Col. D. is satisfied that Spanish tobacco upon such rich, warm land as his, could be made a very profitable crop, if they could only once "kick themselves clear of the traces" that bind them to the cotton-sacks, whether making or losing. And Col. D. assured me that at present prices, he did not make 5 per cent on his capital. And yet, in addition to what I have mentioned, he makes about eight bales to the hand. He puts up his cotton in bagging made of his refuse cotton at the factory in Natchez. A few years ago he sent a crop to market put up in thin boards bound round with ropes like common baling. The cotton bagging is much handsomer and tighter than hemp, but a little more liable to be torn by handling; by the constant use of those abominable cotton hooks, which open great rents in the bags, through which another kind of hooks contrive to hook a kind of rent, though they themselves are all anti-renters. But if cotton planters understood their own interest, they never would use any other than bagging made of cotton that will hardly pay for sending to market. To do this, they must have manufactories right in their midst.

I have visited no place in the south where everything wore so much the appearance of a well ordered "No. 1, Yankee farm," as does every thing about this place. There is but one important thing lacking, and that is a complete system of side-hill ditching.

By way of contrast to the manner of stabling horses last described, I annex a description of Col. Dunbar's carriage house and stable, that will suit other latitudes.



Carriage House and Stable.—Fig. 12.

The building is 40 ft. square, 10 ft. posts. The upper end of the plan, figure 12, is the front end of the building, having a large window in the gable to put in fodder. The carriage room A, is 20 ft. square, and has two set of ten foot doors. Upon each side, B and C, are two rooms ten feet square with outside doors, for saddles, harness, and all kind of horse trappings. Back of these, E and F, are two rooms of the same size, with outside doors and doors opening into the passage G. One of these is for corn, and the other for chopped oats, &c. In one corner of this room the stairs H, open from the passage to the loft.

The manger and feed boxes I, are along side of the passage very convenient for feeding. The back end is divided into stalls K, having each a door from outside. The passage being always open, and the sides of the stable part being made of slat-work, gives a free circulation of air; and for aught I coould see, this stable was full as good as a "lot" enclosed with a rail fence. The Col. also has a very large stable with open-work sides for the field horses and mules.

His whole farm, buildings, orchards, garden, yards, quarters, shops, stock, and tools, besides ten thousand little "fixings," are well worth an examination and patterning after by his brother planters, whom I earnestly wish would visit his place and learn that there is nothing in the climate of Mississippi to prevent the existence of thrift, order, neatness, regularity, and consequent comfort upon a cotton plantation.

I must say that I was delighted with my visit of a day to this fine plantation, and could have spent several other days profitably to myself, with a man of such a character for energy, enterprise, and intelligence, and whose laughing eye constantly tells you that there must be no "blue devil-ism" here; and who has a wife of just such a character as I wish every other Mississippian had; and then, like Col. Dunbar, he would have a *home* worthy the name of that sacred place toward which our hearts constantly yearn as we wander over the surface of this rough world.

But I must on! on! on! "There is no rest for the wicked." The day (March 6,) is most lovely, clear and warm, and upon the ten miles to Washington we will make no call, although there are many fine looking places that would be worth our notice; yet there are several others that bear the fatal mark of "*gone to gulleyville,*" and others that are rapidly going the same gate. It is a most singular soil, and when a gulley once begins, it seems to melt down, down, down, into a deep ditch whose sides are as straight and perpendicular as though cut by a spade and line. I have seen ridges standing between these ditches ten feet high, and quite sharp on the top, and only a foot or two thick at the base. It appears never to dry and crumble down, and of course never falls by freezing, and there they stand, slowly washing down by rain, while upon each side the ditch grows deeper with every shower.

SOLON ROBINSON.

CULTURE OF THE STRAWBERRY.

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LUTHER TUCKER, ESQ.—On my return recently from one of the courts in my judicial district, I took up "The Cultivator," which had come in my absence, and noticed my name in association with Mr. Hovey's, placed there by "J. F.," of Rochester, to indicate a "discrepancy" in the production of the strawberry. If J. F. is really seeking information, as he intimates, he could have have found it to a certain extent by a small calculation as follows: Suppose Mr. Hovey had been gratified in getting two bushels from upwards of 5,000 vines, he would have obtained about one-tenth of a gill, or about a small table-spoonful of berries from each vine; would J. F. be satisfied to cultivate with this prospect? By a similar calculation, I obtained in 1843, about half a pint from each vine, the vines standing one and a half feet apart each way. Is this a wonderful product? In 1844, I sent to the Editor of the "Cambridge Chronicle" a heaping pint of strawberries, and the pint contained 32 berries, and 24 weighed one-quarter of a pound, averaging in size four and a half inches in circumference; and if J. F. has ever seen the statement of the strawberries exhibited at the Horticultural Exhibition in Washington last spring, he will remember that there were six specimens of Hovey's seedling, and none of the berries measured less than 4½ to 5 inches in circumference, so that if they would have averaged an inch square, allowing for cavities in measurement, and as there are 2,145 and six-tenths inches to the bushel, Mr. Hovey's two bushels would not have given him one such berry to the vine. But I will explain the "discrepancy." J. F. will note that I speak of my vines being a year old. They were planted in April, had the whole year to grow, and attained their full size. Now most persons plant out their runners in August or September, as recommended by Mr. Knight and other horticulturists. These vines barely grow enough to stand the winter, and the following spring bear but little if any fruit. It was upon vines of this age that Mr. Hovey must have made his calculation; and I have no doubt that this vine, like other vegetables, must have its age of fructification. I was precisely in this predicament this last spring. I had the same beds set last fall, which gave me the yield in 1843; plants set out last August, I mean of 1844, and this spring I did not get two gallons from them. But if J. F. could only see the perfection of the plants now, he would concede the prospect of a greater yield next spring than one-tenth of a gill, or one big berry to the vine.

BRICE J. GOLDSBOROUGH.

Cambridge, Md., Nov. 19th, 1845.

FARMING IN ALABAMA.

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MR. EDITOR—As the year is now drawing to a close, I feel it a duty I owe to the different agricultural papers I take, to give some account of my farm and system of farming. Could the plan of comparing notes become general,—that is, if each reader of an agricultural paper would in a short and plain way, write out his system, giving the amount of capital employed in farming, the number of acres planted in the different kinds of crops, the manner of cultivating them, the time of planting, the season, &c., &c.,—we should at once become acquainted with the mode of cultivating lands at the north, south, east, and west, and should know the profits of farming in each section of our wide spread country.

I will give you a few extracts from my agricultural book for 1845. In the first place allow me to say a word in regard to the manner in which I keep this book. I commence on the first of January, each year, and charge myself with every dollar I employ on my farm, and estimating all produce at what I believe it would sell for in cash. I make an entry of the kind and amount of work done each day. I also keep a complete account of the seasons, the time of planting, and the manner of working of each crop; keeping an exact account of all money laid out. At the close of the year I give myself credit for all cash received and for all improvements made. In this way I am prepared to know what interest I am making on the capital employed.

On the 2d page of my book for the present year, I find I have charged with capital employed in agriculture, $8,550.

My land is poor pine land; half of the cleared land very hilly, and the other half perfectly level, as it is divided by a large creek. It is sandy land. There is cleared 267 acres, leaving about 100 acres timbered.

Of the cleared land, we planted in	corn, ...	120	acres.
" " "	cotton,..	80	"
" " "	oats,. ..	60	"
" " "	potatoes,	3	"
" " "	rice,....	2	"
" " "	garden, .	2	"
		267	

I find we had arrived at page 48 by the 1st of March;

that the months of January and February were taken up in cutting, rolling and burning logs—in breaking up land—heading for corn and cotton—and in hauling out and scattering manure. I find (at page 30,) that we had made and hauled out 275 loads [how much at a load?] of compost manure. The manure is prepared by hauling to a lot, where my cattle, to the number of forty head, are yarded every night—equal parts of blue marl and pine shaw, making alternate layers of each. We were thirty days engaged in hauling the marl and pine shaws, and in hauling out the manure:

At $2.00 per day,.................. $60.00.

I find, (by page 44,) that we commenced planting on the 26th of February—the corn planted on the broken land—the rows laid off six feet apart, on the horizontal system—the stalks left standing at two feet distance in the drill, and peas planted in the middle between the rows.

I find, (by page 64,) that we had a frost on the 19th of March,—that cut the corn planted on the 26th Feb., down to the ground. I find, (by page 75) that we commenced planting cotton on 31st of March—the cotton planted on the level land—thirty acres of which was manured with the compost manure, by running a deep shovel furrow in the center of the former cotton row, spreading the manure in the bottom of this furrow, and heading on with a turning plow—the cotton then planted on the top of the ridge. I see (by page 79) we commenced plowing and hoeing our corn crop on the 4th of April. I find (page 82) that I copied into my diary or farm-book, the following arrangement of a farm owned by Mr. J. W. W., of South Carolina. This farm contains 353 acres, to wit:

In corn,..............................	150	acres.
" small grain,........................	100	"
" cotton,.............................	90	"
" potatoes,...........................	7	"
" rice................................	6	"
Total,................................	353	

Now when it is known that many of our farmers in the south and south-west, plant more than half their land in cotton, having less than half for the entire provision crop, is it to be wondered at that we are all the time buying our provisions and selling cotton, or rather giving it away at half the price it ought to bring.

I find (at page 88) that our corn was bitten down on the 10th of April a second time. I find (by page 92) that we were in great want of rain on the 15th of April. I find that the 19th of April was taken up in running round our cotton the first time—three plows and nine hoes being at work. I find (at page 100) that we were still in great want of rain on the 26th of April.

I have copied this much to show the plan of keeping the book. But to give you some account of the situation of matters at the close of the present year. I find the following entry at page 150 on the first day of October: "For the last four months scarcely any rain has fallen." We gathered our corn crop on the last of September, making 1300 bushels, but with prudence it will answer us, as we sowed about 60 acres of oats on the first of October.

We make thirty-five bales of cotton, and it is a most splendid article.

We put our bales at $40 each, ...	$1,400,00
I have expended as follows:—	
44 days hauling manure, ...	88,00
24 days hauling shaws, at $3 per day,...	71,00
30 more days hauling same, at $2½,.....	75,00
Other improvements on the farm,.......	100,00
	$334,00

ALEXANDER McDONALD.

Eufaula, Ala., *Dec.*,1845.

"There is no better dessert fruit than a good apple, and in this fruit England beats all the world, with the exception of America. The Newtown pippin is unquestionably the first of apples."

PRINCIPLES OF PLOWING.

……

MR. EDMONDSON, editor of the "British American Cultivator," in his report on the State Fair at Utica, says in reference to the Plowing Match: "Some of the work was tolerably well executed, but on the whole it would not have met the approbation of a British plowman. The furrow-slices were six inches deep, and from twelve to fifteen wide; and in the main turned perfectly flat. The plows were short in the handles; and in their general construction did not appear well calculated to turn a well proportioned furrow. The plowmen have rather an imperfect idea of the best mode of forming ridges, and in taking up the two last furrows; they were so deficient in the latter particular, that among the twenty competitors, there was not a single individual who attempted to finish his work." He further remarks, that he "offered to plow a native-born Canadian youth of only 16 years of age, against any native-born American that could be produced. "We made this challenge," he continues, "not from any desire of competing for a wager, but merely to convince our American friends that their whole system of plowing, at least so far as scientific principles are concerned, is radically deficient."

We have no doubt that the competitors at the Utica plowing match, as well as the American farmers generally, would be glad to adopt any improvements which could be suggested on their present modes of plowing; we have therefore copied Mr. Edmondson's remarks for the purpose of showing his views, and would now respectfully call on him to inform us what kind of plowing would "meet the approbation of a British plowman:" what he considers a "well proportioned furrow, and what are the "scientific principles," by the application of which, our "*whole system* of plowing" is proved to be "radically defective."

OXEN FOR PLOWING

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THE advantage of oxen in farm-labor, depends much on their discipline. If they are of the right form and spirit, they may be trained to walk as fast as horses, and will do as much at the plow, excepting perhaps in the very hottest weather. There are some oxen that will even stand the heat in the field as well as horses. The first premium for plowing at the state plowing match at Poughkeepsie, in 1844, was given to a man who used a middling sized pair of oxen. They did their work quicker and better than any other team, and there were several pair of large horses. It was a very warm day, but the oxen were less worried, and were evidently able to perform more in a day, than the horses.

In the report of the committee on plowing with single teams at the Essex county, (Mass.) exhibition, we find the following remarks, by the chairman, J. W. Proctor. It is proper to observe that there were matches with two yoke of oxen as well as with one yoke, and also a match with horses. The quantity of ground was the same, one-fourth of an acre, in the three matches, but there was but little difference in the time occupied in doing the work—though one of the single teams of oxen plowed their land some minutes sooner than any of the horse teams. Mr. Proctor's remarks are deserving particular attention as showing the capability of oxen in plowing, and also for a suggestion contained therein in reference to the subsoil plow:

"From these experiments we learn that an acre of land may be plowed by a single pair of cattle and one man in four hours, and probably nearly two acres in a single day. When we take into view the expense of operating a team of this description, compared with those usually employed in this business, it will be quite well for our farmers to consider whether most of their work cannot be done with one pair of cattle, and, if two pair are to be used would it not be better to cut the first furrow of less depth, and apply the power of the second pair to a SUBSOIL plow to follow directly after. If we do not entirely mistake the signs of the times, our modes of preparing land for culture will ere long be essentially modified by the use of the *sub-soil plow*. In the county of Worcester, where the management of land and teams is understood as well as in any part of the commonwealth, the premiums are limited to one *one pair of cattle without a driver*."

WINTER EMPLOYMENTS.

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> " Now shepherds, to your helpless charge be kind—
> Baffle the raging year, and fill their pens
> With food at will; lodge them below the storm,
> And watch them strict."

Next to man's duty of providing for himself and his own household, is that of relieving, to the extent of his power, the wants of his fellow-men in general,—and next to that, is the duty, (to say nothing of interest,) of protecting and nourishing the animals placed under his care, and from which his own comforts are so largely derived. Winter is indeed a season of gloom and unhappiness to those who are in need of food, raiment or shelter; and in truth, however well provided the farmer and his family may be in these respects, if he has the common sympathies of humanity, he will find himself a stranger to peace of mind, while any of the animals dependent on him, are miserable from hunger or exposure; but let every individual of his flocks and herds, receive the full care and attention requisite to their comfort and enjoyment, and a consciousness of this will enable the owner to rest quietly on his pillow, though the storm may howl and rage around.

Besides the cutting and collecting wood and timber, and other business usually done in the winter, the farmer may do much in this season, towards forwarding the labors of spring. Every farmer should have a workshop, where, in stormy and inclement days, he or his men may be employed in mechanical work. If extensive operations are carried on, there should be a blacksmith's forge with an anvil and such apparatus as is necessary for doing small jobs. Implements should be made and repaired, and everything put in readiness for use. A little practice will enable any man of tolerable ingenuity to use the carpenter's or blacksmith's tools so well that he may save many a dollar.

Although the farmer is sometimes prevented from carrying on out door operations by the severity of the weather, his time during this season may be as profitably employed as in any other part of the year. The leisure now enjoyed, permits his mind to be directed to subjects of interest and importance which he had not the opportunity to examine thoroughly, when more busily engaged. He has time for studying and laying plans for future operation—time for reading and for investigating the principles on which his art is based,—a knowledge of which enables him to direct his labors understandingly. By reading he acquires information as to the state and condition of agriculture everywhere. In relation to the different branches of husbandry, he notes well the practices of others, and carefully compares them with his own—resolving to improve his system by adopting whatever is applicable to his circumstances. While prosecuting his inquiries, however, he should avoid a credulous assent to untried schemes and theories. Though he should examine freely, he should apply cautiously—he should endeavor to "*prove all things, and hold fast that which is good*"—counsel, which, though originally given in reference to spiritual concerns, should be held as a motto in all temporal affairs.

The farmer should also provide means for the intellectual improvement of his family. The character of his sons and daughters, depends much on the opportunities they have *at home* for the acquirement of knowledge. Many young men are made discontented with the life of a farmer, and are, perhaps, driven to habits of irregularity, from the want of opportunities for cultivating their minds—from the want of that knowledge which would give them both "power" and pleasure. Every effort should therefore be made to render home pleasant. Books and periodicals, suited to the ages and capacities of both sexes, should be provided. They should be such as will not only convey instruction in relation to the business affairs of life, but of a character also that will tend to improve the morals and elevate the higher sentiments.

Nor should the mind of the farmer himself be restricted to one subject or class of subjects, for in the whole range of nature there is nothing that bears not some relation to his happiness. Let him, then, study nature in all her shapes and forms—let him heed well her teachings,

> " And mark them down for wisdom."

Every season will afford opportunity, to the man o philosophic mind, for observation or for useful reflection and contemplative enjoyment:

> " E'en winter wild, to him is full of bliss,
> The mighty tempest, and the hoary waste—
> Abrupt, and deep, stretched o'er the buried earth,
> Awake to solemn thought."

ANSWERS TO INQUIRIES.

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Disease in Fowls.—J. L. R. (Wilmington, Del.) The disease you speak of is called by various names in books, such as roup, catarrh, &c., but is more known in this country as "swelled head." It is a bad disease, and is believed to be contagious, though it is often produced spontaneously, or from causes unknown. As soon as a fowl is discovered to have the disease, it should be taken away from the healthy ones, and kept in a moderately warm and dry place. We have heard of various remedies, but believe the best is to wash the head often with Castile soap-suds, with occasionally a wash of sugar of lead. If they are very bad, it is as well to cut their heads off, for it is difficult to save them; and if they live, they generally lose one or both eyes.

Training Horses for Saddle and Harness.—"A Subscriber" at the island of Bermuda wishes for some directions on this subject. Will not some one furnish us an article giving the best mode of breaking horses for these purposes?

Hybrid Strawberries.—"A Subscriber," (Smithtown, L. I.) We cannot suppose different kinds of strawberries would mix in the *runners*. Hybrid plants are produced by the pollen from blossoms of different kinds impregnating the same pistils; the *seed* produced from such an impregnation, partaking of the intermixture. We cannot imagine any other way in which hybrids could be produced, and as the runners you speak of do not come from seed, we cannot see how any new variety should occur.

Worn out lands for orchards.—C. Smith, (Newport, N. Y.) We do not see why the "worn out lands of Long-Island and New-Jersey," if naturally warm, may not be made to produce fruit-trees well. As to the "barren land near Albany," we remark that much which a few years ago was considered such, is now made to produce fruit trees and fruits quite well, and excepting the liability of some portion of it to frosts, we believe it would generally do well for that purpose. As to the "four best varieties of winter apples," we suppose hardly any two persons would agree in opinion; but all things considered, can you do better than to take the Blue Pearmain, Herefordshire (or Winter) Pearmain, the Swaar, and either the Esopus Spitzenburg, or Rhode-Island Greening?

Agricultural reading.—W. B. H. (Philadelphia.) We would recommend, as a course of agricultural reading for a young man, the best of our agricultural periodicals, Johnston's works, (beginning with his catechism,) and the whole of the works relating to agriculture, published under the direction of the British Society for the Diffusion of Useful Knowledge; but with all reading, we would earnestly advise the constant practice of observation and comparison, by which only, can knowledge be practically and profitably applied

THE CULTIVATOR.

ALBANY, JANUARY, 1846.

OUR NEW VOLUME.

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With the beginning of the year, we renew our labors to

"Improve the soil and the mind."

It affords us pleasure to state, that the present volume of the Cultivator commences under auspices not less favorable than those of any preceding one; and we are encouraged by a well grounded hope of giving superior value to our pages, and more widely extending our sphere of usefulness.

With this number,—both for the variety and sterling worth of its contents, and the excellence of its illustrations and improved typographical execution,—we think our readers will be well pleased.

It will be seen that we give in this number, communications from correspondents in England, Ireland, Switzerland, Canada, New-Hampshire, Connecticut, Ohio, Indiana, Illinois, Alabama, and from no less than ten counties in our own state, many of which will be found of unusual interest.

Our readers, without going from their own fireside, can take a look at Mr. Donaldson's famous prize cow, and hear numbers of their brethren detail the products of their superior dairy cows....with our Irish correspondent, they can drop in to breakfast with a large company of the sterling farmers of the Emerald Isle, take an airing in one of the finest Parks in the world, and pass through the farm-buildings and yards of a most extensive and admirably arranged farmery....with Mr. Mitchell admire the grandeur and beauty of the scenery of Switzerland, see where

"In peaceful vales the happy Grisons dwell;"

or, climbing with the mountain-shepherds, to some Alpine height,

"Look downward where a hundred realms appear"

with David Thomas, learn to imitate nature in her prodigal display of floral beauty.... with others. learn how to make their gates, salt their meat, and keep their accounts....they may spend an hour with Mr. Geddes, who will instruct them in all the minutia of laying cement pipes, so that their herds shall not have to roam abroad for water at this inclement season....with Mr. Howard, they may visit the five hundred and thousand acre cornfields of Ohio....with Mr. Hardy, examine the flocks on the western prairies....Mr. Hyatt will exhibit to them the drawings of a beautiful cottage with the details of its arrangements and the cost of its erection.... from Mr. Quincy they may receive lessons of wisdom in language which, for beauty and eloquence, has rerely been equalled....as specimens of agriculture in our Southern States, they cannot fail to be greatly interested with the description of the plantation of Colonel Dunbar of Mississippi....and from Mr. M'Donald they will learn the course of farming or planting in Alabama. When these articles, and other valuable ones contained in this number, shall have been read, and it is considered that this is but a specimen of the twelve which form a volume, we presume it will be readily conceded that The Cultivator is worthy the support of American farmers.

☞ Reader, if you are pleased with this paper, and wish to have it circulated in your neighborhood, will you show it to your friends, and make an effort to raise 10 or 15 subscribers? By clubbing together, you will remember that 15 copies can be had for $10, making the price of a single copy but 67 cents.

TO CORRESPONDENTS.

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Communications have been received, since our last, from Farmer C., Frederick A. Wier, Brice J. Goldsborough, A Farmer of Tompkins Co., Alex. M'Donald, J. W. Peckham, Alex. Leeds, A Subscriber at Bermuda, C. T. Albot, J. S. C., J. Moore, J. P. Norton, C. N. Bement, P. Barry, A Subscriber, D. G. Mitchell, H. S. S., G., J. R. Howard, W. R. Prince, T. C. Peters C. E., Wayne, S. W., Robin, Mountaineer, J. P. Norton, W. Bacon, S. B. Buckley, A Subscriber, Geo. Blessing, J. B., H. R.

The inquiries of "Highlander," were forgotten till too late for answer this month.

Several communications in type for this number, are delayed on account of our pages being full,—among these, we find one from Wm. Bacon, Esq., which we had especially intended for this month.

☞ An engraving of the gag and strap, sent us by D. S. of Burlington, N. J., was published in the 9th vol. of our paper, p. 38.

S. P. T., Winnsborough, S. C.—There are no Dorkings to be had in this vicinity.

C. C. C., Schenectady.—We know of no Bolton Grey or Creole fowls, in this neighborhood.

An Old Subscriber, New-York.—The Alpaca is not to be obtained in this country; nor do we know where you can obtain "a young full-blooded Maltese Jack." Any one having such an animal to dispose of, might find a purchaser by advertising him in this paper.

S. S. G.—We are open to conviction, and shall readily adopt any suggestion, which we may deem an improvement.

White-Thorn for Hedges.—H. L. (Apalachin, N. Y.) We are unable to say whether "our white-thorn is suitable for hedges" or not. Will some one tell us?

MONTHLY NOTICES.

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Libel Suits.—The Editor of the American Agriculturist having declined to furnish the name of the writer of the libellous article published in that paper for November, the Editor of the Cultivator has commenced suits for libel against the editor and publishers of the Agriculturist.

Valuable Bull for sale.—It will be seen by an advertisement in this paper, that Mr. Donaldson offers for sale, the splendid improved short horned bull "*Prince Albert*," whose portrait, engraved on steel, we issued with our August number of last year. That portrait, beautiful as it was, failed to do this magnificent animal justice, as will be seen by reference to our remarks in the number accompanying it. He was imported by Mr. R. when a year old, at an expense of $600. He is now five years old, and is a bull of great substance, remarkable for symmetry and fineness of bone, and few if any of the bulls imported or bred at home, can be considered as surpassing or even equalling "*Prince Albert*."

Lancaster County Farmer.—This is a large folio paper published at Lancaster, Pa., by J. B. Garber, and edited by Ele Bowen. We have received the first four numbers, in all of which we notice more or less matter copied from the Cultivator *without credit*; in the last number we find no less than *eleven* of our articles, making nearly six large columns, without one word or sign in reference to their origin. *Is this right?*

P. S. No. 5 of the above paper is just received—it contains *fifteen* articles filched without credit from the Cultivator—though three of them were also published the week previous. If the value of those articles to Lancaster county farmers, is such as to justify their weekly repetition, do they not deserve at least the trifling tribute of credit?

Seedling Apples.—We received, sometime since, from Richard Shaw, of Berlin, Rensselaer county, two specimens of sweet, and one of sour apples, which originated on his farm. The sour apple and one of the sweet kinds, he imforms us possess the remarkable property of continuing in a state fit for eating from November to June. We think them (particularly the sour kind,) deserving of introduction to our nurseries and orchards.

DOUBLE WILD ROSE.—We have received from RICHARD JOHNSON, East-Groveland, Livingston Co., some plants of a "double wild rose," as he calls it. He transferred this rose from the location where he first discovered it, to his garden, where it became *monthly*, "flowering from June till frost came." During the extreme dry weather of the past summer, the flowers were single. We have placed some of the plants sent, in the hands of Mr. Wilson, who will take good care of them, and note their curious developments.

FINE APPLE.—Mr. Johnson also sent us a sample of an apple which he thinks is a seedling, and which he proposes to call the "*Groveland Russet.*" It is certainly a very fine apple both in appearance and taste. But we think Mr. J. is mistaken as to its being a seedling. It corresponds exactly with the description of the Herefordshire or Winter Pearmain, and some good pomologists have no hesitation in pronouncing them identical. It is a celebrated variety and deserves exteasive cultivation—in eating from November to February.

SAMPLE OF CORN.—We have received from T. F. YOUNG, Esq., of Oyster-Bay, L. I., a sample of a large kind of white corn grown by him. It seems to be a variety intermediate between the white flint of the north and the white gourd seed or "horse-tooth" corn of the south, and is apparently well adapted to the climate of Long Island; the ears are large and long, some of them over thirteen inches in length, with a not very large cob, and the kernels are very large.

VINE CULTURIST WANTED.—Mr. J. B. GARLAND, of Fredericksburg, Virginia, being about to embark in the cultivation of the vine, is desirous of procuring the services of an individual practically acquainted with the management of vines and the manufacture of wines. A man of good habits, and who can be relied upon is wanted. Address as above.

CORRECTION.—In our notices of "*Live Stock in Connecticut,*" (page 349, last vol.) we spoke of a bull belonging to ORREN THOMPSON, Esq., which we stated was called *Sir Dick*. We were mistaken in the name—it is *Cerdick*. He is registered in the fourth volume of the Herd-book, as follows:

"CERDIC, (5843,) red and white, calved March 21, 1839; bred by Mr. Clark, Hellaby, late the property of Mr. J. Knowles, Attercliffe, near Sheffield, and is now in America; got by Cerdic (1802) d. Rosamond, by Topper, (2768) g. d. Miss Hutton, by Protector, (1346) gr. g. d., by a bull of Mr. Colling's."

On page 320, last vol., we mentioned East-Windsor, Ct., as having been the residence of Col. Jeremiah Wadsworth. It should have been Hartford instead of East-Windsor.

DUTTON POTATOES.—Mr. Street Dutton has left us a sample of potatoes with this name. He obtained them several years ago from a man by the name of Dutton near Philadelphia. They are white, smooth-skinned, medium sized potatoes, of excellent quality for the table. Those left us, are a part of a lot for which Mr. D. has put in a claim for a premium from the State Ag. Society.

GOOD WHEAT CROP.—Edward T. Bellah, Esq., of Brandywine Hundred, Delaware, harvested the past season, 358¾ bushels wheat from nine acres, being 39¾ bushels to the acre. "He manured the field in the spring, planted corn, cut off the corn, sowed it in wheat and luked it in both ways among the corn roots, and gave no other dressing except to sow 39 bushels bone dust over *one* acre, which he did not think better than the st."

☞ We have received a paper from Col. ALEXANDER MCDONALD, president of the Barbour county (Ala.) Ag. Society, giving an account of the exhibition of that association, which took place at Eufaula on the 5th of Nov. last. The exhibition seems to have been generally very satisfactory, and great interest appears to be exerted for the improvement of all branches of husbandry. It is mentioned that Col. McDonald sent some potatoes to the show which sold for ten cents a piece. Col. McD. forwarded us a sample of his cotton, which so far as we can judge appears to be of very superior quality.

NEW-YORK STATE AGRICULTURAL SOCIETY

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ANNUAL MEETING.

The annual meeting of the N. Y. S. Ag. Society will commence its sessions in the city of Albany on the 3d Wednesday (21st) of January, 1846, and continue two days.

The meetings for business will be held at the State Geological rooms, commencing at 10 o'clock, A. M. on Wednesday.

A public meeting will be held at the Assembly Chamber of the Capitol on Wednesday evening, where there will be a public discussion of subjects interesting to agriculturists. And on Thursday evening the annual address will be delivered by the President of the Society.

Farmers and the public generally are invited to be present. L. TUCKER, Rec. Sec'y.

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NEW-YORK STATE AGRICULTURAL SOCIETY.

THE Executive Committee of the N. Y. S. Ag. Society, met at the Society's room in this city on the 11th December. Present, Messrs. Walsh, Vail, Prentice, M'Intyre, Hillhouse, and Tucker—ALEX. WALSH, Esq., in the chair.

A letter was read from the President, expressing his regret at his inability to attend the meeting, and recommending the appointment of Committees on Essays, Field Crops, &c.

The Rec. Secretary reported that he had as yet received but one Essay for premium—seven applications for the prizes on Farms—four, for those on Winter Wheat—two on Barley—two on Peas—one on Indian Corn—one on Flax—two on Mangold Wurtzel—two on Sugar Beets—on Carrots and table Potatoes, one each.

The following Committees to award the prizes, were then appointed:

ON ESSAYS—Prof. E. Emmons, Prof. A. Dean, and Judge Van Bergen.

ON FARMS—Hon. J. P. Beekman, Hon. Samuel Young, and Judge Cheever.

ON WHEAT, BARLEY, RYE, AND OATS—Gen. Thomas Farrington, J. B. Duane, Esq., and Gen. J. J. Viele.

ON INDIAN CORN, CORN FODDER AND BROOM CORN—Geo. Geddes, Hon. Gideon Hard, and Hon. J. B. Smith.

ON ROOT CROPS—C. N. Bement, O. F. Marshall and Elnathan Haxton.

ON PEAS, CLOVER SEED, AND GRASS SEED—J. M. Sherwood, Wm. J. Cornwell and H. E. Meach.

A communication from T. H. HYATT, Esq., of Rochester, suggesting the propriety of offering a premium for plans of residences, was read, and referred to the committee hereafter to be appointed on the Prize List.

Two communications from Dr. A. DOUBLEDAY, of Binghamton, on the subject of the Smithsonian legacy, were read, and referred to a committee consisting of the President, J. S. Wadsworth and Joel B. Nott, Esqrs.

The following communication was then read:

B. P. JOHNSON, Esq.
President of the N. Y. S. Ag. Society:

Dear Sir—I beg leave to invite your attention, and that of the Executive Committee, to an article published in a paper called the American Agriculturist, printed in the city of New-York, for Nov. 1845, p. 352, in which I am charged with abusing the trust committed to me as Secretary of the Society, in the most corrupt manner.

If these charges are true, the Society owes it to itself, to vindicate its character by removing me from the office I hold, and expelling me from its membership.

If the charges are false, and my whole course has been the reverse of that imputed to me, it seems but just that the Society should vindicate my character from the charge of abusing its trusts.

I therefore respectfully ask that a committee may be appointed at your meeting on the 11th inst. to investigate my official conduct as Secretary, and particularly in relation to the charges thus publicly brought against me. I ask that the Committee may be appointed at this time, in order that they may have an opportunity to make their investigations, and be prepared to report at the annual meeting of the Society in January.

Respectfully yours, LUTHER TUCKER,
Rec. Sec'y N. Y. S. Ag. Society.

In compliance with the request contained in the above, the following gentlemen were appointed a COMMITTEE TO INVESTIGATE THE CHARGES AGAINST THE REC. SECRETARY—Hon. Robert Denniston, Hon. John Savage and Maj. E. Kirby.

NOTICES OF PUBLICATIONS.

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ESSAY ON GUANO, by I. E. TESCHEMACHER. Boston, A. D. Phelps, publisher.

In this pamphlet Mr. T has given the results of analyses of the various kinds of guano, with accounts of its application to Indian corn, grass land, grape-vines, trees, peas, beans, melons, potatoes, turneps, strawberries, celery, cabbages, flowers, &c., &c., on all which plants it operated beneficially. Mr. T. is of the opinion that the introduction of guano into this country would be an advantage. He has been led to this opinion from the investigations he has made in regard to its composition, as well as from actual trials with it.

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HISTORY OF WYOMING, in a SERIES OF LETTERS, from CHARLES MINER, to his son, WILLIAM PENN MINER. Published by J. CRISSY, Philadelphia.

This is a work of 488 pages, with an appendix of 104 pages. Perhaps a more attractive subject than the History of Wyoming, could not have been chosen. The tragic fate of that settlement is well known, and a charm has been thrown around the event by story and song, which gives to every thing connected therewith, a peculiar interest. The author has been indefatigable in collecting matters relating to his work, and has embodied many interesting and valuable facts not heretofore made public. We think the book will prove exceedingly popular and find an extensive sale.

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REPORT OF THE EXPLORING EXPEDITION to the ROCKY MOUNTAINS in the year 1842, and to OREGON and NORTH CALIFORNIA in the years 1843—'44, by Capt. J. C. FREMONT.

We are indebted to D. GOLD, Esq., Washington, for a copy of this document. We have not as yet had time to give it a full examination, though we have seen enough to know that its contents are interesting and valuable.

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NEW-ORLEANS COMMERCIAL TIMES.—This is an interesting and ably managed paper lately established in the Crescent city. It has an agricultural department, of which, we are pleased to see, our friend THOS. AFFLECK, Esq., of Washington, Miss., has the editorial charge. Mr. A. is a sensible and ready writer on all branches of agriculture and horticulture, and is not unacquainted with the position he has assumed, having for some time edited in an able manner the Western Farmer and Gardener. We trust his connection with the Times will be pleasant to himself, as we have no doubt it will be beneficial to the public.

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PRAIRIE FARMER.—This monthly agricultural periodical, published at Chicago, Illinois, by JOHN S. WRIGHT, and edited by him in connexion with J. AMBROSE WIGHT, is one of the most valuable among our agricultural exchanges, and deserves, as we are happy to learn it receives, the liberal patronage of the farmers of the thriving section for which it is designed.

CONDENSED CORRESPONDENCE.

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CULTURE OF POTATOES

We give the following from a letter from WILLIAM M'COY, Esq., of Franklin, Pendleton county, Va. We agree with him, in what he says as to the value of the patatoe as food for stock. Most farmers would think that he had little reason to complain of the product of his potato crop this season; and we shall be greatly obliged if Mr. M'Coy will gives us a particular account of the process of culture by which he has raised the unusually large crops he speaks of. "For the last three years preceding this," says Mr. M'Coy, "I have had great success in the cultivation of potatoes, which I have raised to some extent, for the purpose of wintering cows and calves; this year I only got at the average rate of 350 bushels to the acre. Formerly I never raised less than 800 bushel to the acre. It seems to me that this is by far the most profitable crop that we can raise, for the purpose of feeding stock, either cattle, hogs or sheep. We wash the potatoes, and then mash them with a maul, and with the addition of a little corn meal, they are decidedly the best food that I have ever found for milk cows and calves. In fact I believe that with potatoes and corn meal, I can fatten beef cattle as rapidly, and more economically than on any thing else, the authority of Boussingault to the contrary notwithstanding. Unfortunately the rot has this year made its appearance among our potatoes. At least 10 per cent of mine were rotten when taken from the ground, and my neighbors complain of the same loss."

Mr. M'Coy informs us that the past season has been one of great discouragement to the farmers in his vicinity. There was an almost total failure of the grass crop on account of the drouth—corn and oats, not more than half a crop, and every thing else in proportion, except wheat, which was a tolerably fair crop as to quantity and first rate inequality.

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AGRICULTURAL SOCIETIES AND PAPERS.

We make the following extract from a private letter of a secretary of one of our County Ag. Societies:—"The society this year as heretofore, threw upon me the burden of making out a list of premiums to be awarded at our annual fair, and I tacked on, whenever I could, a copy of the Cultivator or Genesee Farmer, so that a copy of the Cultivator or Genesee Farmer accompanies every premium. This I did, believing that our Ag. Society cannot be sustained unless there is a more general diffusion of knowledge gathered from agricultural papers. I believe a political party might just as well undertake to keep its existence without political papers as an Ag. Society without the circulation of agricultural papers. I intend during the coming winter to visit every town in the county, (if my professional employment will permit,) and represent to the farmers the necessity of sustaining the county society which has run pretty low, and in so doing, I shall take the liberty to urge upon them the great benefits to be derived in taking the Cultivator."

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SUCCESSFUL DRAINING.

Mr. MILO INGALSBEE, of So. Hartford, N. Y., after detailing many improvements in the system of husbandry, which have been introduced in consequence of reading the Cultivator, in his vicinity, says—"I believe every one of your regular subscribers here, have done something at underdraining, with complete success. I will mention one piece of successful draining. A lot of five acres, had been mowed from time immemorial, producing yearly from 1¼ to 2 tons of inferior hay, and hard work at that, as the ground had never been plowed; 35 rods of underdrain were made in the spring of 1842, at a cost of from eight to ten dollars. The field manured with twenty five loads per acre, and planted with potatoes; the crop proved about middling. In 1843, it was planted with the common twelve rowed corn, and produced the greatest growth I ever saw, some of it growing to the height of ten feet. In 1844, it was sowed with oats, and the only objection to this crop was, that it was too large. In 1845 it was mowed, having been seeded down the year previous. How much hay was cut I do not know, but it was of the very best quality, and was apparently as large as could grow in any place; a second crop might have been cut, but as pasturage was rather short, a lot of calves were turned in, and they are to this day, standing examples of the benefits they received. I have not aimed at definiteness in this account, but you will readily perceive the vast difference between this worthless piece of land as it was, and as it now is."

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DRILLING INDIAN CORN.

Extract of a letter from Mr. **Alex. D. Coulter**, Herriottsville, Penn., to the Cultivator :—" Last season I tried an experiment in planting corn, by drilling it in rows three feet apart, two grains fifteen inches apart in the row. On three acres I raised 369 bushels of ears. After the corn was about a foot in height, some of the old fashioned farmers prophecied a failure. They said it would end as many other visionary projects of 'book farming,' and were very much astonished at the result."

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CURE FOR WOUNDS IN HORSES.

While writing I will give you the following recipe for a preparation to cure wounds in horses. I have never seen it published, and if it is new to you, perhaps it may be of service:

Take one gill of turpentine, two gills of whiskey, and one egg. Beat the egg well, and mix the three together. It should be applied with a feather or swab twice a day. It keeps a wound healthy, and prevents its healing too rapidly. For its efficacy I can vouch.

J. S. C. *Trenton, N. J.*

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THE NEXT STATE FAIR.

The following resolutions, passed at the late meeting of the Cayuga Co. Ag. Society, have been forwarded to us for publication, by **E. W. Bateman**, Esq., President of that society:

Resolved, That the New-York State Agricultural Society be requested to hold its next annual fair at Auburn; and that the members of this society tender their services in making suitable preparations for the same.

Resolved, That the President be requested to transmit to said society the foregoing resolution, with the assurance that the farmers and citizens of Cayuga county will promply devote their energies to the procurement for said society of the comforts and conveniences requisite on that occasion.

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CIRCULATION OF AGRICULTURAL PAPERS.

A gentleman at Baldwinsville, who encloses us $10 for 15 copies of our paper, says:—" The task of asking a neighbor to subscribe for the Cultivator, when $10 will pay for 15 copies, is an easy one. Patriotism should cause us to do so, while so much of our national wealth and prosperity depends upon agriculture—the spirit of philanthropy should cause us to do so, as long as its genial effects are as visible as they are at present, and he who does much to enlarge the circulation of this useful document, must partake of the feelings of a benefactor, for it scatters its benefits wherever it goes."

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SUPPOSED SEEDLING PEAR.

We have received from **John Morse**, of Cayuga, a figure and description of a pear called *Keeler's Virgalieu*. The tree which produced it, supposed to be a seedling from the White Doyenne, (Virgalieu or St. Michael,) is said to be growing in the garden of Dr. Keeler, at Seneca Falls. It is said to be of thrifty growth, with "branches upright, young shoots yellowish gray or light brown." We deem it unnecessary to give the description of the fruit, as it seems to be copied almost verbatim from Mr. Downing's description of the White Doyenne, and indeed from Mr. Morse's account we cannot see how it differs from that variety. Until it is ascertained for a certainty that it is a seedling, we cannot think it necessary to publish the figure.

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CROPS, POTATO ROT, &c.

Mr. **J. C. M'Lanahan**, Bedford county, Pa., informs us that the summer crops in that county, were very light the last season. The wheat crop, however, was remarkably heavy, and the weight of the berry extra-heavy, weighing from 65 to 69 lbs. per bushel. His potatoes had no appearance of rot, when harvested, but have since, as in this vicinity, commenced rotting.

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FEEDING POULTRY, &c.

What do poultry of all kinds, when fattening, particularl y require?

Ans. Three things are necessary to perfect success; first, *meat*, (fat pork or cracklings:) second, charcoal, broken very small; third, gravel and water.

What are the best articles of food?

Ans. Cornmeal wet with milk and mixed with charcoal; wheat screenings and fat pork, or fresh meat or cracklings.

What is the best cure for the pip in chickens?

Ans. A piece of fat pork as large as can be thrust down the throat, is a simple and *certain* cure.

The above is not theory but experience, which any man may easily make his own. W. B. H.

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CORTLAND CO. AG. SOCIETY.

Extract of a letter from **J. S. Leach**, Esq., to the editor of the Cultivator, dated Dec. 4:—"Our County Ag. Society met on the 4th inst. The meeting was large and spirited, and its proceedings characterised by great harmony. A resolution, moved by H. S. Randall, Esq., was adopted, recommending the introduction of standard Agricultural periodicals, and other agricultural works, into our Common School Libraries. The following officers were unanimously elected for the ensuing year:—Henry S. Randall, Esq., of Cortlandville, President—Thomas Harrop of Scott, Charles McKnight of Truxton, Squire Jones of Homer, and Hiram Hopkins of Cortlandville, Vice-Presidents—Amos Rice, Treasurer—James S. Leach, of Cortlandville, Sec.—Paris Barber of Homer, Cor. Sec.—William F. Bartlet, Marshall—Henry Stephens, David Mathews, Hammel Thompson, Andrew Dickson, O. M. Shedd, Henry Brewer, Oren Brown, Martin Sanders, and Morris Miller, Executive Committee."

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EFFECTS OF NEW-JERSEY MARL.

Extract from a private letter from a subscriber, (W. B. H.,) in Philadelphia:—" In the part of New-Jersey where my son now is, nature has been extremely liberal in furnishing inexhaustible deposites of marl; and the effect produced upon sandy lands, is almost beyond belief. The finest corn which I saw in Monmouth county, during the severe drouth of the past summer, was upon fields in the vicinity of New Egyyt, which ten years since, presented almost one unbroken surface of soil, so sandy that corn would hardly grow four feet high, and would ear within six inches of the ground. Marl has been found in great abundance in all their creek banks, and freely used. The soil, which is in many places based on clay, has no doubt been stirred rather deeper than before. mixing the subsoil with the light soil above, thus greatly benefiting it, and adding much to its depth, and giving increased consistence and fertility."

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ROOT CULTURE.

Extract from a letter from **S. B. Burchard**, Esq., of Hamilton, Madison county, N. Y., to the Editor of the Cultivator:—" I am a thorough convert to the root crop, especially the carrot. From the little experience I have had, I am fully convinced that I can winter forty cows on four acres of carrots, with one-fourth of the hay, with the use of straw, which I used to throw into the barn-yard. in better condition than formerly, with

the full amount of hay and three bushels of grain to each cow. I think that green-sward is preferable to fallow land. 1st. The expense of tilling and keeping weeds from injuring the plants, is much less, as, by plowing the sward deep, the weeds do not start. 2d. The sod will soon rot, and afford the proper nutriment for the plants. My present calculation is to plant four cres to beats and carrots the next season."

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KILLING RATS.

Mr. Alex. Leeds, of St. Joseph, Michigan, says:—"I can give your correspondent G. E. J., Binghamton, *one remedy* for killing *rats*, that I know from experience to be effective. Mix some unslacked lime with corn-meal, and place where the rats may *accidentally* find it. They will soon become *very* thirsty, and upon drinking water the lime slacks and swells the rat like "*all natur*." In the Bahama Isles sponge is fried and placed in their way; they eat, drink, swell, burst and die. If they die in their nests, or any concealed place, vast quantities of Cologne will be required. Lime and meal should be, of the first, one part, and meal two parts, *well* mixed together."

THE MARKETS.

FOREIGN AND DOMESTIC.

By the Acadia, which arrived at Boston on the 19th, we received English papers to the 4th Dec. American flour had declined in the British markets, and the effect of this intelligence has been to depress prices full 50 cents per barrel in this country. At New-York, Saturday, 20th, $6 per bbl. was demanded for Genesee—buyers only offering $5.75—nothing doing. American wool was still finding its way to English markets, but some fault seems to be found with the manner in which it is put up. It is hoped that this defect will be remedied, as this new article of trade may become of much importance to this country. Cotton at Liverpool continued on the decline The English papers seem to regard the deficiency of the grain-crops as less than is generally represented, though it is admitted that the quality is quite inferior. Most of the papers consider it pretty certain that a change in regard to the laws regulating the importation of corn, will take place at no very distant day. The damage to the potato-crop by rot, is admitted to be great, in most parts of the kingdom, but the papers state that many exaggerated accounts have been promulgated

We give the following from the *Tribune* of the 19th, in regard to prices of provisions at New-York. Prices of grain were much affected by the news brought by the Acadia, but as we have at this date, (Dec. 22.) no means of ascertaining particulars, we omit, for this month, our usual list.

PROVISIONS.—Pork is heavy, and we hear of no transactions of importance. The quotations are nominally $10.37½a$10.50, and $13.37½a$13.50. We notice small sales Dutchess county at $14.25a$14.75. In Beef we hear of very little doing Good country brands are quoted at $5.25a$8 25; City at $5.50a$5. Sales 160 bbls. common country brands at $5.00 and $7.94a$8.00. Prime Mess Beef for export is worth $14.00. Beef Hams are $9.50 a$9.75, and keep active. Lard is quiet. We hear of no sales of importance. City 8½a9c. For cheese there is some inquiry, and prices have rather an improving tendency. Sales at 7½c. for shipment. Sales Butter at 14a19 c. for Western Dairy; Ohio is 12a12½c. for good lots. Pickled Meats are not very plenty, and dull. We quote Smoked Hams 10a11c.; Sides 8c; Shoulders 7a7½c.; Smoked Beef 7c.

WOOL—(Boston prices.) Dec. 27

Prime or Saxony fleeces, washed per lb..........	40a45 cts.
American full blood fleeces,....................	37a40 "
" three-fourths blood fleeces,........	34a35 "
" half blood do	32a33 "
" one-fourth blood and common.....	29a31 "

FOR SALE.

A GOOD grain Farm, three miles from the village of Mexico (Oswego county, N Y.)

It contains 100 Acres, about 90 being under improvement, well watered; a thrifty young Orchard, and Buildings nearly new.

From two to three hundred bushels of Wheat have been annually grown, and other kinds of grain amounting to over 1000 bushels a year

The kind of soil is highly adapted to clover and plaster, and the rotation system of tillage.

Terms, $20 per acre; one-third down; the remainder may run for eight or ten years. B. E. BOWEN.

Mexico, Oswego co, Nov. 18, 1845.

TIE-UP CHAINS of different sizes, at the Agricultural Warehouse, 23 Dean-street. E. COMSTOCK & CO.

Dec 1.

HUSSEY'S REAPING MACHINES.

WILL be delivered in Baltimore, Md., and Auburn, N. Y., a 100 dollars. They will be made of the best materials, and will embrace all the late improvements The public prints abound with its recommendations—*all* of which the reaper is warranted by the subscriber to fulfil.

Hussey's Corn and Cob Crusher, lately improved, is warranted by the subscriber to excel on thorough trial, any in use. Price from 25 to 35 dollars. In ordering the above machines, please address the subscriber in Baltimore. OBED HUSSEY.

Baltimore, Dec. 1—4t*

SEEDLING APPLE-TREES FOR SALE,

BY J. J. THOMAS, at his Nursery, Macedon, Wayne Co, N Y., one year old, and from 5 to 10 inches high, at $3 per thousand No charge made for packing, for orders of 5000 each; or 50 cts. per 1000 for less. Orders to be post-paid and accompanied with remittances.

Oct. 1—1t.

TO SOUTHERN PLOW DEALERS.

THE subscriber having received the agency from a large and well known manufacturer, is enabled to furnish Plow Castings and plows of every description, usually sold in the Southern and Western country, at considerably lower prices than have heretofore been offered in this market for cash or approved paper. Also, Ruggles, Nourse & Mason's celebrated Plows. Dealers and others are invited to call. Orders, by letter or otherwise, will be promptly attended to. JAS. PLANT,

Dec. 1—1t. 5 Burling Slip, N. Y. City.

GUANO.

RECENTLY received direct from Ichaboe, per Shakspeare. The various experiemets made from this cargo has proved its quality equal, if not superior to any other Guano. Great care has been taken to put it in tight casks, that it may be kept any time without losing the ammonia. For sale in lots to suit purchasers, by

EDW D. K. COLLINS & Co.,

Dec. 1—tf 56 South-street, New-York.

VALUABLE WORKS, BY A. J. DOWNING, Esq.

1. *The Fruits and Fruit Trees of America*, or the Culture, Propagation and Management, in the Garden and Orchard, of Fruit Trees generally; with descriptions of all the finest varieties of Fruit cultivated in this country. 1 thick vol. 12 mo. Fifth edition, with many engravings.—$1·50. Or a superior edition, in large 8 vo., to match the author's other works. $2.50.

"At length we have the gratification of announcing this long expected work, and from a perusal of it, we can say, that nothing compared with it on the subject of Pomology has yet been published in the United States. This work will unquestionably now become the standard pomological work of this country; for the great care bestowed on the different kinds, arranging and connecting numberless synonyms, and giving accurate outlines and descriptions, will make it a safe guide."—*American Agriculturist.*

2. *A Treatise on Landscape Gardening*; adapted to North America, with a view to the improvement of Country Residences. Comprising historical notices, and general principles of the art; directions for laying out grounds, and arranging plantations; description and cultivation of hardy trees; decorative accompaniments to the house and grounds; formation of pieces of artificial water, flower-gardens, etc.; with remarks on Rural Architecture. New edition, with large additions and improvements, and many new and beautiful illustrations 1 large vol 8 vo. $3.50.

This volume, the first American Treatise on this subject, will at once take the rank of THE standard work."—*Silliman's Journal.*

"Downing's Landscape Gardening is a masterly work of the kind—more especially considering that the art is yet in its infancy in America"—*Loudon's Gardner's Magazine.*

3. *Designs for Cottage Residences*, adapted to North America, including Elevations and Plans of the Buildings, and Designs for Laying out Grounds. By A. J. Downing, Esq. 1 vol. 8 vo., with very neat illustrations. Second edition, revised $2.00.

A second edition of "Cottage Residences" is just published as Part 1; and it is announced by the author that Part II., which is in preparation, will contain hints and designs for the *interiors* and furniture of cottages, as well as additional designs for farm buildings.

4. *Gardening for Ladies;* and Companion to the Flower-Garden. Being an alphabetical arrangement of all the ornamental plants usually grown in Gardens and shrubberies; with full directions for their culture. By Mrs. Loudon. First American, from the second London edition. Revised and edited by A. J. Downing, Esq. 1 thick vol. 12 mo., with engravings representing the processes of grafting, budding, layering, &c, &c. $1.25

"This is a full and complete manual of instruction upon the subject of which it treats. Being intended for those who have little or no previous knowledge of gardening, it presents, in a very precise and detailed manner, all that is necessary to be known upon it, and cannot fail to awaken a more general taste for these healthful and pleasant pursuits among the ladies of our country"—*N. Y Tribune.*

Published and for sale by WILEY & PUTNAM,

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" " Thresher, "			25 00
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" " Thresher, "			30.00
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Superior Two Horse Spike Threshers,	25	and	30
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The "Warren" (beater) Thresher is celebrated for its simplicity and safety in use; also that it is not liable to get out of order, will leave the straw whole and unbroken, and at the same time, thresh clean and rapidly.

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J. PLANT, 5 Burling slip, N. Y.

Jan. 1—1t

GRANT'S FANNING MILLS

MAY be had at the Albany Agricultural Warehouse, 23 Dean-street. This is a very superior mill. For description and cut see Cultivator for 1845, page 27[illegible]

[illegible]

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THE proprietor of this establishment is the sole agent in Baltimore and vicinity, for the sale of the following new and valuable improvements, viz:

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Douglass' Premium Pumps, which are so constructed as to prevent freezing in the coldest of weather.

Rogers' Mill, for cutting and grinding corn stalks.

Together with a general assortment of the *latest* and most *approved* agricultural implements, constantly on hand, and manufactured to order.

EZRA WHITMAN.

Baltimore, Nov. 14, 1845.

DURHAM BULL FOR SALE.

THE subscriber (not having sufficient use for him,) offers for sale his imported, thorough bred Durham Bull, "Prince Albert,"

He is five years old—a roan, of medium size —quiet in temper, and easily managed. For a portrait and description of this bull, see the August number of the Cultivator, and for his pedigree see the British Herd Book, vol. iv., page 382. His sire was the celebrated bull, "Sir Thomas Fairfax."

If not previously sold, he will be will be offered for sale at the next show of the New-York State Agricultural Society.

Letters on the subject may be addressed to the subscriber at Red Hook, Dutchess county, N. Y., where the bull can be seen.

Jan. 1, 1846.—tf ROBERT DONALDSON.

HAND POWER THRESHING MACHINES.

THIS invention by the undersigned, has been perfected in its construction and fairly tested in performance since the first notice of it as given in the last September number of "the Cultivator."

It proves to be a very efficient and valuable machine, and every way adapted to the wants of small farmers. It is found to be capable of thoroughly threshing from 3 to 5 bushels of wheat per hour, and of course, about double that quantity of oats. This result can be safely warranted. It is well calculated for the southern market.

Retail cash price of those now made is $35. Liberal discount to dealers. Orders made direct to JAS. PLANT, No 5 Burling Slip, New-York City, the inventor and manufacturer, will be promptly attended to. Jan.1—1t.

THE CULTIVATOR FOR 1846.

THE new volume of "The Cultivator," for 1846, commences on the first of January, and the Nos. will be promptly issued on the first of each month as heretofore. In the importance, extent and variety of its contents—in the number of its contributors—in the beauty and variety of its illustrations, as well as in the extent of its circulation, this paper is without a rival in the agricultural press, at home or abroad.

Terms—Single copies, $1.00 a year—Seven copies for $5.00—Fifteen copies for $10. Any person disposed to aid in promoting the circulation of "The Cultivator," will receive sample numbers and prospectuses, on application, post paid. Address LUTHER TUCKER Editor Cultivator. Albany, N. Y.

☞ Editors with whom we exchange, will confer a favor by publishing the above.

THE PRAIRIE FARMER,

VOL. VI. 1846.

PUBLISED monthly at *Chicago, Ill.*, by John S. Wright and devoted to western agriculture, mechanics, and education: Containing 32 large octavo pages, besides a cover of 16 pages, on which advertisements, &c., are given. It is the best advertising sheet in the west. The matter being mostly supplied by correspondents from all parts of the west, it will give more reliable information concerning that region, than can be gleaned from any other source, and furnishes fuller instructions concerning western husbandry than any other kindred publicaaion. John S. Wright, and J. Ambrose Wight, editors.

Terms—$1 per annum—6 copies for $5, 13 for $10. *Postage* 12 cents per annum under 100 miles, 18 cents over 100. Subscriptions received at this office for those to whom it is more convenient than to send by mail. *All communications must be post-paid.*

ONION SEED.—1000 lbs. of Blood Red Onion Seed.
150 " Pure White " "
500 " Yellow " "
all the growth of the present season and raised from selected roots
For sale at the Seed Store of the Hartford Co. Ag. So., by
Hartford, Ct., Oct. 10, 1845.—3t E. W. BULL, Seedsman.

GARDENER WANTED.

A YOUNG MAN of good character, who understands his business thoroughly, may hear of a pleasant and permanent situation on application to the Editor of the Cultivator. [illegible]

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. III. ALBANY, FEBRUARY, 1846. No. 2.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

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where single numbers, or complete sets of the back volumes, can always be obtained.

☞ "The Cultivator" is subject to newspaper postage only. ☜

LETTERS FROM MR. HORSFORD.—No. VIII.

……

We have received from our German correspondent, Mr. HORSFORD, a package of letters on various subjects, all of which we shall lay before our readers in due time. The following one, in reference to an institution for agricultural instruction, will be read with interest by all—especially those whose minds have been directed to the establishment of institutions for that purpose in this country. In our next we shall give Mr. HORSFORD's description of the celebrated Fellenberg school, at Hofwyl, in Switzerland.

……

AGRICULTURAL INSTITUTE OF WURTEMBURG.

Giessen, Nov. 30, 1845.

MR. TUCKER—I promised in my last to give some account of the Royal Agricultural Institute of Wurtemburg, near Stutgart.

The estate and castle bearing the name of Hohenheim, were appropriated to their present use in 1817. They had previously been in the possession of noted families, and at one time, that of the Grand Duke Charles. Royalty had planned and executed with no small measure of taste, the division of the grounds, and the Institution of Agriculture commenced. Few estates could have been selected combining so many advantages for the purposes to which this was destined. Seven hundred and eighty-eight English acres are spread irregularly over a broad mound, and through a valley upon one side, the whole length of which is traversed by a stream sufficiently large for milling purposes. Near the top of the mound stands the castle and connected buildings, which, with the court-yards, have a length of sixteen hundred, and a depth of five hundred and forty feet.

The various apartments of this immense establishment furnish abundant room for the residence of the faculty, pupils and laborers; also rooms for instruction, for the mineralogical, zoological, model, and other collections—the housing of stock and grains, fruit, and other farm produce—for the carrying forward the different kinds of manufacture—wagons, plows, machines, &c., with the sugar, alcohol, starch, and vinegar production. Its distance from Stutgart is about six miles; sufficiently near to enjoy all the advantages of a ready market, and command at the same time a prompt supply of the wants of the institution.

The whole farm is cut into several lesser divisions, each bearing another name. These are again subdivided and numbered. There being no hedges, the limits are furrows between monuments at the opposite extremes. The lots given to experiments, contain each precisely one fourth of an acre, (Wurtemburg;) and every fact relating to the development of each crop, especially the amount of seed, manure, and labor bestowed, and each return, are noted. Besides these fields, upon which almost every variety of crop is grown,—if not in the same year, in successive years,—nurseries of fruit and exotic trees, orchards, flower and kitchen gardens, pasture lands, pleasure grounds, and in general, all the usual, and even unusual features of the best farms to be met with.

In the cultivation and improvements, the implements esteemed in the institution the best, are employed. The stock consists of sheep, about 1,100; cattle, mostly cows, nearly 100; breeding mares 10; besides a number of working cattle and horses. The sheep are Merino and Saxon—looking finely. They are under the control of one principal shepherd and several assistants, each of whom has one or two dogs. The flocks are pastured in summer, but housed regularly at night through the whole year. Each sheep is numbered by a system of ear-marking of great simplicity, and its fleece is every year weighed. The whole flock, at intervals of a few weeks, is weighed in a Fairbank's scales.

The cows are of the Seminthal breed from Switzerland. They are said to have certain excellencies; though their appearance in the stall was altogether indifferent. They are stalled through the year. I have already mentioned, if I remember right, that the herd of cattle is considered as a manure manufactory, and in this light subserving as important, if not indeed a more important end, than in their daily supplies of milk. I find it difficult to appreciate this statement made to me, though it is obvious that every source of manure is gleaned with a care of which, in the generally (as yet) rich lands of the new world, we know nothing.

The cow stable is a hall of more than a hundred feet in length, and at least twenty feet high. The cattle stand facing each other from opposite sides of a cut-stone platform, about two and a half feet in elevation. They are chained to a manger immediately attached to the platform. Their fodder is spread before them, and by no possibility comes to the floor of paved stone. Several cows, steers, and yearling heifers, were fed each apart from all the others, the fodder being weighed before, and the excess gathered up after eating, also weighed. These cattle are severally weighed at certain intervals, and in this manner the value of different kinds of fodder is ascertained. The amount of milk from each cow is measured once a month. Indeed the whole system is arranged with a great degree of scientific purpose.

The breeding mares are good selectious, I understand from the common stock and English crosses. The foals, through the generosity of the present king, are derived partly from thorough Arabian stallions, and partly from valuable native stock. The stalls for the dams, are about fifteen feet square, in which the occupants remain the early part of the day and night, untied. The colts and fillies occupy larger pens where several are together.

All the results of the different schemes of experimenting, in growing roots, grains, fruits, exotic woods, in the treatment of stock, and in the determination of the value of fodder, are published in a weekly agricultural paper, edited by one of the faculty.

Among the productions of the botanical gardens, experiment fields, and orchards, every kind of useful plant suited to the latitude are to be found. Their seeds and fruit are most carefully, and with great attention to purity, preserved for sale. I noticed in the immense apartment devoted to keeping these in good order, and dry, seventy-two varieties of potatoes,—above fifty kinds of wheat—a great variety of oats, barley, rye, buckwheat, grass, clover, beets, parsnips, cabbages, &c.,—more than a hundred and fifty kinds of apples, two hundred kinds of pears, and other fruits in proportion. Three hundred kinds of forest wood are grown in the exotic nursery, and more than a thousand different plants flourish in the botanical garden. The scions, roots, and seeds from these sources are sold throughout the kingdom, and the income therefrom is not inconsiderable.

The collections for study and illustration, embrace soils and manures—perhaps a hundred varieties, chiefly from different parts of Wurtemburg—botanical specimens, plants, seeds, and woods,—vastly extensive mineralogical, geological, palaeontological collections, especially rich in every thing illustrating those departments of natural history, from all parts of the kingdom—zoological, embracing all the species existing in, or visiting Wurtemburg—anatomical, of cattle, horses, sheep, swine, dogs, cats, and fowls—of teeth for determining age—of bones likely to become diseased—of hoofs with all models of shoes for sound and unsound limbs; of models of agricultural implements as a class, and agricultural architecture of which there are about seven hundred specimens; and many other things not to be grouped or enumerated without occupying too much space.

The mention of these can give no idea of the order, compactness, and adaptation to their end, which these collections possess. For example, the history of the silk work is shown with the aid of glass frames, containing the most elaborately prepared anatomical and physiological illustrations one can conceive. Much of it would require a microscope to see, but it is there. In the botanical collections, upon one side of the room stands a book-case. Upon taking a volume from the shelf, it proves to be a wooden box, overlaid with moss, so arranged as at a little distance to resemble an elegantly fancy-bound book. Within, on one side is the plant, with its leaves and wood, with bark; on the other side its fruit, and cross and longitudinal sections of the wood. In the depression of the back, a little sealed cup of pollen, and a sheet of history of the plant. The *library* was the gift of a prince—at the same time a monument of German patience, science, and patronage.

In addition to these is a collection of apparatus in natural philosophy and chemistry. The Technical laboratory contains the most improved apparatus for the manufacture of starch and alcohol from potatoes, sugar from beets, vinegar, beer, cider, and silk. It also includes the work-shops, in which plows, wagons, and every variety of farm instruments are made, together with the duplicates of the model collection.

The Faculty consists of a

Director, who lectures upon the productions of the animal kingdom, and, the general plan of agriculture pursued at Hohenheim;

Professor of Agriculture;

Prof. of Forest Science, who supervises the forest lands belonging to the estates. There is in this department an Assistant;

Prof. of Mathematics and Physics;

Prof. of Chemistry and Natural History;

Prof. of Technology and Instructor in the Technical Laboratory;

Teacher of Farriery;

Teacher of Field Labor, plowing, hoeing, spading &c;

Teacher of Nursery and Orchard Culture;

Teacher of Machine Drawing;

Assistant to the Cashier, book-keeper, &c.;

Gardener and Smiths.

The course of instruction is upon the plan of a German university. The professor gives lectures which are attended as largely or as indifferently as the students please. Having decided at the commencement of a term, however, which lectures they will attend, these they are required to hear—and at the conclusion of the course, to sustain a rigid examination upon them, and the general subject upon which they treat, in order to secure their diploma.

As there are ninety-four lectures, weekly, in winter, and eighty-five in summer, it is obvious that less than a three years' course would be imperfect. Candidates, as the students are called, are admitted for less periods—for a term, I think. Their qualifications at universities, before entering, will naturally render some of the courses unnecessary. Most of them have completed what would be considered a college course, with us, and many have completed an university course, previous to entering. They must be eighteen years of age. The practical illustrations of the farm and its appendages, are witnessed in the course of the year. Manual labor of no description is required, though instruction in the different kinds of handiwork, is practically received.

The apparatus for making sugar from beets is put in operation once a year, at a fearful expense, to illustrate the art of winning this article of commerce. The starch manufacture, alcohol production and distillation, and vinegar manufacture, upon the principles of modern organic chemistry, are all conducted in their absolutely practical modes, that the candidates may be prepared as agents or as directors of large estates, or as farmers themselves to carry them forward with profit.

Tuition is 300 florins, or $120, yearly, for foreigners; for Wurtemburgers, 100 fl., or $40. In addition to this is a board-bill, amounting to about 18 cents daily, in some instances less.

The above remarks apply almost exclusively to the theoretical school at Hohenheim. Besides this there is a practical—a work school, designed to make skillful day-laborers, rather than theoretically grounded farmers. The pupils must be not less than seventeen years of age. Two hours of instruction daily, in the winter, and one in summer, are allowed to them, independent of their communication with the director of the work. The following is the course of instruction in this school:—

1st term—Cattle-breeding, and cheese-manufacture.
2d—Sheep breeding and horse-breeding, with attention to wool.
3d—Culture of soils.
4th—General agriculture, swine-breeding, and farm book-keeping.
5th—Special culture of plants.
6th—Fruit, grafting, meadows, bees.

The entire tuition is 100 fl.,—60 for the first year, 40 for the second, and nothing for the third—$40 in all.

The annual expenses of the institution for the year 1843, exclusive of appropriations for extra erections, or changes of much magnitude which have been provided for by the government in all instances, thus far—are

Annual salaries,	fl.7,030
Library, publication, and expenses of scientific excursions,	850
Particular instruction in models, soils, plowing, sowing, &c.,	600
Appropriations to the several departments,	725
Great variety of stationary and sundries, ..	2,260
Director and assistants,	5,365
	fl.16,830
Expense of the lower school,	1,912
Total,	fl.18,742
Or,	$7496.80

With the exception of the extraordinary expenditure for new fixtures, or renewals, or alterations, the produce of the farm and the income trom the academic department equal the expenses of the Institution and the entire management of the estate.

In explanation of the item "scientific excursions," it should be stated that tours for study and observation, of greater or less length, are made by corps of the classes in the vacations between the terms. To aid them a sheet has been published at Hohenheim, including a notice of every feature in agriculture, manufactures, collections in natural history, localities of rocks and minerals, breweries, vintages, mills, &c., &c. The value of the sheet can easily be conceived.

This system of excursions is a part, perhaps I may say, of continental or European education. Apprentices, even, are required by law to travel a year before they can commence business in Germany. The students of the Polytechnic school of Paris, have travelled over repeatedly, I have been informed, the French kingdom.

An early observer of mankind describes his hero as one who "had seen much of cities and of men." In France, oppportunities for observation seem to have lost none of their regard, to which according to this writer of antiquity they are entitled, among those who control more or less the education of Europe.

Before me lies a book of 330 pages octavo, illustrated by a series of large plates, some twenty iu number, embracing a detailed description or Hohenheim, its buildings and grounds, and its system of instruction, in theory and practice, with a record of almost every item of information to be desired concerning the institution. Beside it lie a pile of statutes, catalogues, farm plans, inventories, lecture schemes, &c., &c., all of which I could wish for the sake of those interested in grounding agricultural institutions in America, were translated into English.

From these, and what I have observed during two days, I have drawn the imperfect account as given above. I can but hope, general as it is, that it may be of service.

I should not perhaps neglect mentioning that my notes in many particulars record the superior excellence of American implements and expedients when compared with the best I have seen here. An institution enjoying royal patronage, and furnished at the outset with a royal estate and edifices, should in the course of tweny-seven years, have evolved a system of agricultural education possessing many excellencies. This was the least that could have been expected. Notwithstanding all the effort bestowed upon improvement, several features impressed me as imperfect; and yet it is possible that my associations in the new world disqualify me in a measure for forming an opinion as to what would be practically the best for Germany. I will only add that the distribution of labor among the faculty, seemed to me to be susceptible of modification for the better. The Professor of Chemistrry, has botany, mineralogy, geology, and zoology, besides the duties of a practicing physician, (!) entrusted to him. Now if there be any one science pre-eminently at the foundation of rational agriculture, it is chemistry; and in view of this, that the professor of this department should have his energies divided upon such a variety of different and distantly associated (in some respects certainly) branches of science, and his efficiency lessened, naturally, in proportion, impressed me as a great oversight. In the department of chemistry, not a single step towards settling the weighty problems for the farmer is being taken. I say this with undiminished regard for the rare combination of industry, talent, and perseverance presiding over the chair of Chemistry and Natural History at Hohenheim. It is impossible that he should do more than he does.

In general, in the French and German institutions, one of the schemes of professional life, is to furnish facilities for scientific advancement. The world is thus benefitted, and though the sphere of instruction may thereby be more limited, the knowledge imparted will be proportionally more profound. This feature, to this moment characterizing scarcely an institution in America, is not kept in view in the apportioning of duty among the departments of instruction at Hohenheim. Were one to ask what has roused universal attention in the last twenty years to the subject of directing all processes of art by science, and in the last eight years of improving agriculture by drawing aid from the same source, the answer would come from a few professional chairs, where men of capacity, industry, and energy, have been provided with conveniences for prosecuting scientific research.

Truly yours, E. N. Horsford.

CULTURE OF CARROTS AND ONIONS.

……

Mr. Editor—Having had good success in raising carrots, onions, &c., I have had a desire to make my mode of raising such vegetables public, as it differs in some respects from the modes usually practiced in this country. But when I considered I was not well skilled in writing articles for publication, I was led to hesitate, until I reflected that language—the vehicle by which our ideas are communicated—may be compared to the carriage which conveys the produce of the farmer to market; and when I remembered tnat it matters little whether the carriage is constructed with two, three, four, or even five wheels; so long as the produce is easily, expeditiously, and safely conveyed, it gave me some more confidence. And then again, I received additional encouragement by some remarks of a correspondent of the Albany Cultivator, who, after speaking of the reading of agricultural papers, says:—"This reading gives an opportunity of becoming acquainted with the practical experience of farmers. It is much to be desired that more of this class of farmers could be induced to give their views. There is too frequently a reluctance to writing. This reluctance should be overcome. It is not expected that plain farmers should always frame sentences in the style of *literary* writers, nor is this necessary—give us the *facts* in an intelligible manner." And so I am encouraged to proceed. And to commence, I will state the amount of carrots and onions I obtained, and then some of the means used to obtain so large crops. But before proceeding, I will remark that I have no doubt that in several respects my mode of management may be improved upon.

Of carrots, I had at the rate of twelve hundred nine and a half bushels to the acre, large measure, and of onions, six hundred and thirty bushels.

The land on which thesecrops grew—being of a full middling quality as to richness—was plowed early in the spring, at a time when the ground was in a sufficiently dry* state to pulverize. It was then harrowed several times over. Then plowed a second time in such a manner as to have no treading of the team upon it. A row of boards to stand upon while sowing the seed, was laid down on one side of the ground about to be sowed. With a common hay rake, six or seven feet in breadth was soon made sufficiently level to sow. A line fastened to two stakes was stretched to mark the place where the first row was to be sowed. Then with a common garden hoe, a place near one inch deep was made for the seeds. The onion seeds were then sowed very evenly and expeditiously with a contrivance which I will hereafter describe, and covered with the hoe. Then the line was moved fifteen inches to mark out the place for the second row. The boards were then moved over the row that had been sowed, so that the second row could be dug out, sowed and covered as was the first. The line was then moved to mark the third row, and the boards were also moved over the second one, which was already sowed. In this manner I proceeded until the whole was finished, and the ground presented a beautiful level and mellow appearance, as if a light roller had passed over it, without having the appearance of being trodden down, as is often the case where men walk upon the ground. The carrots were sowed in much the same manner as the onions, with the exception that eighteen inches space was allowed for the rows, instead of fifteen. A small quantity of plaster was sowed with the seeds.

---

* As there is often too much moistnre in land to plow it early in the spring; and as carrots, onions, and parsneps, need to be sowed early, it would doubtless, in many cases, be well to ridge the land up in the fall

When the carrots and onions were up sufficiently high to hoe, I commenced at one end of the rows, and hoed in as far as I could conveniently reach. Two pieces of board, each near three feet long, and ten inches wide, were placed in two of the rows I had commenced hoeing, and which I wished to finish. I then stept on to one of the pieces of board, and hoed on as far as I could conveniently reach; then stept on to the other board in the adjoining row, and hoed an equal distance in that row. Then, with my hoe placed against a nail fastened near one end of the board, I moved the board I had just left, about two feet in advance; then stepped on to it, and moved the other board in like manner. Then hoed two feet ahead, moved my boards again, and so proceeded on to the ends of the rows. This process, although not quite as expeditious as without boards, not only left the ground in a very mellow state, but many of the fine lumps were broken which by the common method of hoeing would not have been. The land presented, after this process, the appearance of having had a roller passed over it, and I think it was better fitted to withstand a drouth than it would have been if left in a rough state.

The onions were hoed three times; and at each time when the ground was in a sufficiently dry state to pulverize. The carrots were hoed in much the same manner as the onions, and in addition the ground was loosened up between the rows with a dung fork just before the tops became so large as to prevent such an operation. The earth was not heaved up with the fork, as is commonly done in preparing beds for sowing, but it was barely loosened by running down the fork and giving it a pry. Some of your readers will perhaps think I am very particular in describing my mode of procedure, and to such, if any there are, I would say, it was by attending to the small matters as well as the large, that, under Providence, I was enabled to realize so large a result.

The implement I have referred to for sowing the seeds, I will now endeavor to describe. The bottom of an old fashioned coffee pot was knocked out.* The pyramidal shaped top was soldered on fast. A hole near one third of an inch in diameter was made in the extreme end of the top for the seeds to run through. The whole was then inverted, and a handle near two feet long was nailed to one side to hold it by when in use. The seeds about to be sowed were thoroughly mixed with sand that was dry and had been sifted to free it from lumps, small sticks, &c. On account of its simplicity and cheapness; on account of the even and *sure* manner in which it distributes the seeds, and on account of its being well adapted for sowing short rows as well as long ones, it is well calculated for extensive use.

I will also describe a simple, cheap and useful instrument I used to dig my carrots and parsneps. It was made out of a piece of large sized wagon tire about fifteen inches in length. One end was sharpened, and the other slit down near three and a half inches. The part on one side the slit was left straight to be inserted in the handle. The part on the other side was turned down horizontally, to place the foot upon when the instrument was in use. With one of these implements, a man will dig, in a given time, one quarter more of parsneps or carrots than he could with a common spade.

Sandlake, Dec., 1845. S. S. G.

DESCRIPTION OF A MOUNTED STONE-BOAT.

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TAKE a stick 3 by 4 inches, and 4 feet long, on which place a pair of strong wheels, 18 inches in diameter. Take another axle, 4 by six inches, 6 feet long, into which frame a tongue suitable for oxen or horses, as the case may be, then borrow the forward wheels from your lumber wagon, and place them on the long axle, and you have the "movements" finished.

Then take stone-boat plank of the usual form and bolt the hind ends fast to the *under side* of the short axle; pin a piece of scantling across the forward ends, into the center of which drive a strong iron staple and connect it by the swivel to the under side of the long axle. The reason why the forward axletree is longest, is, to give room for the wheels in turning. The above combines in a great measure the advantages of a cart and stone-boat, viz., ease of draft and facility of loading. HIGHLANDER.

Nov. 8, 1845.

EXPERIMENTS WITH NEW KINDS OF WHEAT.

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EDITOR OF THE CULTIVATOR—Perhaps it may not be uninteresting to you to hear a few particulars regarding some experiments which I have made in growing certain kinds of wheat, that have recently attracted so much notice in Europe, and more particularly in England. Among the most celebrated growers of wheat is Col. Le Couteur. This gentleman has particularly recommended three kinds, called by him the Bellevue Talavera, the Jersey Dantzic, and the Downy White. Col. Le Couteur was kind enough to send to me in a letter, a small quantity of each of these sorts of wheat before I left England. I obtained also, in London, a small quantity of the Victoria Wheat, which Sir Robert Ker Porter introduced from Caraccas, in South America, and which was favorably spoken of by Humboldt. I likewise procured some of the Whittington White Wheat, brought originally from Switzerland. All these I sowed in September, 1843. The following winter destroyed all the plants of the Jersey Dantzic, and nearly all those of the Bellevue Talavera, and the Downy White. Those however, of the Victoria and Whittington wheats survived the frosts of that inclement season. At harvest a few ears only of the Bellevue Talavera and the Downy White were obtained. The crop of the Victoria and Whittington wheats was pretty good, but each crop was rather late in coming to maturity, and each was therefore affected with the rust, and the grain was shrunk.

The seed of each sort thus obtained was sown in September, 1844. The wheat plants stood the winter very well; the Bellevue Talavera not appearing on this occasion to suffer to any perceptible extent. At the harvest of the present year, the crop of Victoria wheat was very good. The Whittington was not so good. The Bellevue Talavera yielded remarkably well; for although a very small quantity of seed was scattered thinly over a space three yards by four, measuring twelve superficial square yards, yet the product amounted to about three quarts, which was at the rate of nearly thirty-eight bushels per acre. I may add that no manure was applied to the land, but it had been merely fallowed after a crop of oats; and on each side of it, Mediterranean wheat grew, which might yield a product not exceeding twenty bushels per acre. The berry of the Bellevue Talavera wheat is white and large, with a thin skin; its straw is sufficiently strong and not too long; and it does not shell out when allowed to remain uncut after it is fully ripe; but in addition to these good qualities, it has the desirable property of ripening very early,—more early, indeed, than any other description of wheat grown in this part of the United States. It is consequently less liable to be affected with rust. The Bellevue Talavera wheat, therefore, is probably destined, when perfectly acclimated, to become a valuable acquisition to the farmer of this country. Moreover, according to Col. Le Couteur's experience, the Bellevue Talavera wheat will, *cæteris paribus*, yield much more per acre than the best kinds of English wheat. Hence it willbe obvious that it is of primary importance for farmers to make a judicious selection in regard to the sorts of wheat which they cultivate, for if Col. Le Couteur's statement is to be relied upon, and there is not the remotest cause to doubt his veracity, some sorts of wheat will, simply because they are naturally more productive, yield such an additional amount of produce as will more than remunerate the farmer for the labor of cultivation.

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* By the by, I do not use coffee, as I deem it—unless in sickness—an unnecessary, and to many, hurtful drink.

H. R.

Varick, Seneca county, N. Y., Nov., 1845.

"LIKE PRODUCES LIKE."

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THE writer has read your article on this subject, and so far as it regards plants in a state of nature he has no doubt of its correctness.

The humus produced by the decomposition of the trees and leaves of the forest, serves as a manure for the production of future forests—or rather as an absorber of ammonia for the benefit of future forests; and the decomposition of grasses, operates in the same way for the production of future crops of grass.

There is no doubt that wheat if sown on a suitable soil, and left unmolested, would reproduce itself for ages; but my belief is it would degenerate, and thus finally, the grain would not be larger or heavier than that of chess.

Wheat is found as a grass in Sicily, growing in the highways by the sides of fences; but it is a stunted plant, and its seeds are said not to be larger than those of timothy.

Cultivation improves most plants, (the apple, the peach, and the plum, for example,) and roots and grain among the rest.

The grains require animal manures to bring them to perfection, and they flourish only about the residences of men, where they receive the ammonia produced by the urine of men and of beasts. Wheat, with no other manure than the decomposition of its stem, its leaves, and its grain, would flourish, and bring forth fruit, probably to the amount of a few bushels to the acre; but this would not answer the purposes of the cultivator. He must have a large crop of fine wheat, containing a large quantity of gluten. This he cannot obtain on the best of soils, without imparting to the plant at least double the quantity of manure it would obtain from the atmosphere and from the decomposition of the plant of the previous year, the fruit of grain excepted. What then does he do?

By fallowing he destroys all vegetation whatever, turns up the soil and exposes it to the atmosphere, loosens it and renders it porous, so as to become as it were a sponge, to absorb the carbonic acid and ammonia from water and the atmosphere, and in addition to this he buries within the soil animal matter which contains ammonia in a fixed state, and which by the application of water becomes soluble as the plant requires it, and he keeps it there by a top dressing of gypsum—and which is constantly absorbing more from rain water.

This is the state of the land when it receives the grain. The plant has the benefit of the ammonia before it puts forth its leaves, and by its roots it derives nutriment from the same source until it attains maturity. By this process the cultivator, instead of obtaining a few grains from one, obtains an hundred fold, in quality equal, and often superior to that sown; and here I apprehend is the great benefit derived from cultivation, and the application of animal and other manures. The cultivator carries off the grain, and so far robs the soil, and even if he should restore all the rest of the plant, he must make up the deficiency by other manures.

Still it is not to be denied, that the straw of wheat, if applied lightly as a top dressing, would prove a valuable manure for wheat. That straw contains potash, soda, lime, magnesia, alumina, silica, sulphuric acid, phosphoric acid, and chlorine, all of which are necessary for the production of the new plant, and it would be absurd to contend that it would not be benefited by its application.

So far from doing this, the writer knows it would prove a valuable auxiliary—and with the aid of a barrel of manure he is now preparing, which will cost not to exceed $2, he confidently believes he can manure an acre of wheat land sufficiently to produce a full crop of first rate wheat, and he will not say that by the same manure, he cannot at all times, and every year, produce good crops of wheat on the same land. If so, the discovery may produce a new era in the agriculture of the United States. The experiments of the next season will test the correctness of his theory.

A FARMER OF TOMPKINS COUNTY.

P. S. His new manure will prove equally valuable for other grain crops, grass, and roots, and he believes also for cane, cotton, and tobacco.

EXPERIMENT WITH GUANO.

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MR. EDITOR—Let me occupy a small space in your paper to clear up the difficulties in which my article upon the effect of guano, in your November number, seems to be involved. Your correspondent, J. B. C., says that it is not sufficiently definite, and he requests the modus operandi of my experiments. I must confess to the truth of some of his remarks, though I will not allow that my case, and that of the old lady giving a guide to good indigo, are altogether alike, for he admits that my communication furnished him a hint, when surely, the old lady's recipe contained not even *that*.

I did not keep memorandums of the cases, as I had no intention of communicating them for publication, and certainly should not have felt authorized in doing it, had not the effect been so astonishing. Upon one experiment I should hardly think of basing an opinion, and neither upon two ought much reliance to be placed. A variety of experiments, under different circumstances, can only give a sure test of our applications; still I think my experiments are entitled to some consideration, taking the fact into account that other vines and rose bushes situated exactly similar, presented so striking a contrast.

Of guano, I took five pounds, which was mixed with four parts earth, making, say twenty-five pounds. In this state it remained one day, or twenty-four hours, when I dug in about the rose, which is in a half gallon pot, perhaps four or five table spoonsful. I afterwards, in three or four weeks, applied a tea spoonful or so of pure guano, being careful that it did not come in contact with the plant, which has a stem half an inch through, and is two feet high.

In the case of the vine, I dug about the roots to the depth of a foot, into which I scattered the mixture, covering up with ordinary earth. The main stem of this vine, is two inches and a half through, and spreads its branches each way fifteen or twenty feet.

These applications were made the latter part of April or fore part of May. I might add that during the warm, dry weather in summer, I threw about this vine a good many pails of water, (I would like to say how many, but unfortunately can't.) This was done more for the purpose of distributing the guano than with any other object, though I am under the impression that such waterings are very good at any time, but more especially if there has been a lack of rain, and I wanted to see what effect these means together would have. How far each contributed to produce the result mentioned, I leave to J. B. C., and others interested, to determine. I shall, however, follow up my experiments another year, being quite convinced that guano is a most capital fertilizer, and well adapted to the uses of a garden or green-house.

I hope the above explanation will satisfy your "definite" loving correspondent, and enable him to get at the substance of the "hint." A. T.

Brooklyn, Dec. 25, 1845.

IMPORTATION OF STOCK.—The ship Independence lately arrived at Boston, brought four cows and seven sheep consigned to Hon. DANIEL WEBSTER, and these have been sent to Marshfield.

PRESERVATION OF WOODLANDS, &c.

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Mr. Tucker—There are two existing causes from which we of the northern and eastern states have reason at some future time, to anticipate a scarcity of timber for fuel, fencing, and building purposes. One of these, arises from the increasing demand which is constantly arising from a variety of causes, and sweeping over our groves and mountains, until they, the latter at least, exhibit appearances but little more inviting than were those of Sampson when shorn of his beautiful locks, for like his, their strength and glory has departed, not to be sure, by the wily hand of a coquettish Delilah, but through the everlasting influence of a *ready money* getting propensity. What a strange doctrine that, which appears so universally prevalent, that whatever can be turned to cash from the farm, must be so turned, without even risking an inquiry whether the farm is to be impoverished by the transaction or not; and what is a farm worth without a timber lot? Any one who has any experience in farm management, can solve that question from continued experience. And yet, so very regardless are very many of the wants of their successors, with regard to fuel and timber, that they will avail themselves of every opportunity to sell their best trees "in quantities to suit purchasers," "for cash," at any time and at all times, though by so doing they may diminish the real value of their farms at an irrecoverable rate.

But there is another cause why we feel warranted in apprehending a deficiency in wood lots. This is implied in the known fact that vast amounts of woodlands are now subject to a double tax. They must not only furnish fuel for the fire and timber for the farm, and occasionally some of both for market, but they must also submit to heavy drafts for pasturage, so that no new shoots are permitted to start and take the place of trees removed, and in consequence, grass comes in, and the remaining timber grows sickly, and in a short time begins to die, and then, the sooner the land is cleared the better.

Now we hold that woodlands are profitable investments, and will be as long as men build houses or fences, or so long as the increasing numbers of factories or steam engines are throwing off their heavy or continual columns of smoke in every direction. And, if profitable, then they are worthy of protection and economical management.

By protection we mean keeping out of them all kinds of stock, whether quadruped or biped, which is calculated to keep down the growth of young stuff, and this will embrace cattle, sheep, and horses. By bipeds we mean certain vagrant animals, who, though they move on two feet instead of four, are nevertheless endowed with sensibilities but little above the brute creation, and seek no better livelihood than rambling over their neighbor's premises, and falling, pell-mell upon every chestnut and walnut tree that comes within their reach, and disfiguring and frequently ruining their future growth by their lordly prowlings. The last class of these animals, as thousands will attest, are the most annoying, for while good fences will secure horses, hogs, sheep, and cattle, neither good fences, good laws, good morals, or good breeding, offer any impediment to them.

We have adopted, for a few years past, a plan of managing woodlands which so far commends itself so favorably, that we are not only disposed to continue it, but present it to the notice and consideration of others.

In the first place, we do not design to have a hoof enter upon the premises for any purpose except to draw off the fuel and timber for the current year. We have done so since 1842, and the consequence is, a new growth has shot up most luxuriantly, where there was none before, and which promises in a few years to form a beautiful wood-lot.

In the next place, we cut clean as we go, a practice which possesses the following recommendations, viz: Commence on the part of the wood-lot most distant from your dwelling, and clear what you need for your use or supply. Then you have occasion for your path or paths in that part of your premises no further, and they with the rest of the land will grow a new supply of timber, and thereby you will save the use of land. Next year commence on the further side again, and continue doing so. Then, you will yearly be bringing your work nearer home, and the quantity of land occupied by paths will be diminishing every year, until you get over the whole ground. You will also get an even growth of timber by so doing, an attainment that can never be reached by the old process of taking a tree here and another there, to each of which you must have a (perhaps new) path, and in the fall of which you will be almost certain to break down a quantity of young and thrifty timber, which will amount almost to clearing.

Where any one goes into woodlands and selects trees for chopping, he leaves such as remain—and which are perhaps poorly fitted to stand the merciless blasts of winter, more exposed to pelting winds and the severe influence of frost, which are often fatal in their effects upon tall and thrifty trees left under their influence, while the young growth starting up under circumstances to meet such exposure, becomes its own protector, by preparing for itself trunk and branches befitting the circumstances attending it.

Now, I am very well aware, that after all that has been or can be said in favor of this mode of proceeding, that many will be ready to raise their hands in wonder and cry loudly against it. I know very well that it looks bad to see a corner cleared out of a man's wood-lot. It is a sight I would never wish to have sadden my eyes on any other consideration than that of seeing it grow up again. Then I know, the plea will come up, that it will take the timber that has not yet vegetated, so long to grow to a size fit for the axe. Not so long, by the by, where this mode of operation is pursued, taking value into consideration, as when the old method is pursued, for the same number of cords of the same kinds of wood grown after our system, will be worth more than that grown in the half cleared woodlands of the old system, for it will be of a firmer, more compact grain, and of course possess a greater weight. But I have said enough. Those disposed will try the experiment for themselves, and to those who are not, additional words are useless.

Yours truly, W. Bacon.

Richmond, Mass., Nov. 18, 1845.

POSTS UPHEAVED BY THE FROST.

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We observe post fence in certain spots to rise up, annually more and more, until after a few years, swine can creep under; and it often leans so much that props become necessary to prevent it from falling. Now what is the cause of this upheaval?

On examining, we find that these spots are wetter, and the ground more spongy than the other parts of the line. Well, what then? Why, in severely cold weather, the wet surface freezes, fastening round the post a solid cake, under which is applied the great power of water, expanding into ice; and the fence is lifted up. The intensity of the frost, and the looseness—or wetness of the ground, will determine the amount of upheaval, which may be one or more inches of a winter. Perhaps indeed the post may fall back a little when it thaws; but it seldom if ever slides back to the bottom of the hole; and is sure to take a new start upwards in the following winter.

In these insurrectionary movements, several posts are commonly concerned together; and the best way that I have found to reduce them, is to strike with a beetle only a few strokes at a time on the head of each, so that the fence shall not be racked by driving too far at once. When thoroughly driven back, the operation may not need to be repeated in less than two or three years.

It would be the better and cheaper way however, to prevent all such risings in future by filling up the holes with *solid* earth; and thoroughly pounding or ramming down every new layer of two or three inches in thick ness. All soft, mucky, or spongy soil should be rejected. Nothing better than *hard-pan* can be obtained for this purpose—at least a mixture of gravel or small stones through the earth, is desirable. With these precautions, we should have no trouble even in *swales* for the posts even there would stand in dry, firm, solid earth. D. T.

Cayuga county, 12 mo. 20., 1845.

BREEDING AND REARING STOCK.

In the breeding and rearing of domestic animals, there can be no doubt that the application of physiological principles would be productive of advantage. The more perfectly the farmer understands the habits, organization, and functions of his animals, with the more certainty can he produce from them any specific results—the better will he know how to keep his stock in health or to cure the diseases with which they may be attacked—and by becoming familiar with the philosophy of the hereditary transmission of qualities, he will learn how to improve his flocks and herds so that they shall possess the characteristics which will best fit them for their destined uses.

A late number of the Journal of the Royal Agricultural Society, contains a "Prize Essay on *Fat* and *Muscle*," by W. F. Karkeek, veterinary surgeon, &c., in which are some excellent observations, particularly applicable to the breeding and rearing of neat cattle. In relation to the improvement of the fattening tendencies of the breed, it is remarked that—

"By pursuing the system of breeding from fatted animals or those having a great tendency to fatten, *function* must react on *organization*, and at last those qualities become, not only increased, but fixed in the race. By function reacting on organization, is meant—when an organ, as the lungs, for instance, becomes diminished in consequence of not performing its natural function, and the disposition to accumulate fat is thereby produced—the diminished structure is very likely to be reproduced in the progeny of an animal so affected; hence *the reaction*; and if the same system be pursued, particularly in breeding from the nearest affinities, this effect will be more speedily produced. It is in this manner that the greatest improvements have been made in our native breeds from time to time—in the Short-Horns and improved Long-Horns—in the improved Herefords and Devons. The history of those breeds sufficiently proves this. The dam of Hubback, the sire of the [improved] Short-Horned race, became so fat that she soon ceased to breed, and her son, having the same tendency, was useful as a bull but a very short period. This was also the case with Bolingbroke and several of Mr. Collings' best bulls. The two cows of Mr. Tompkins, *Mottle* and *Pigeon*, the originators of the improved Herefords, were selected in consequence of their extraordinary tendency to become fat; and the whole secret of Bakewell, as to the method which he pursued to establish the [improved] Long-Horned cattle and the New Leicester sheep lay here."

"There is, (continues Mr. K.,) a delicacy of form and a refinement of tone which characterize animals bred in this manner, and they acquire early maturity; their bone and muscle are more quickly developed and are soon ripe, because they sooner become old. In a wild state and without reference to the wants of man, we should consider these qualities as a progress towards deterioration; and so they are, since the animals suffer by the change—but man gains an improvement. It will be shown however, before we conclude, that by carrying this system of breeding too far in many instances man has also become a very considerable loser."

In regard to the external signs or points of early maturity, and a natural tendency to produce fat or muscle, the following excellent observations are given:—

"The first token which a grazier will make use of, for the purpose of ascertaining the feeding properties of an ox, is technically *the touch*—a criterion second to [illegible], inasmuch as a thick, hard, unyielding hide indicates a bad feeder, and an unprofitable animal. A thin, papery-feeling hide, covered with thin hair indicates the very reverse of the former, as such an animal will speedily fatten, but will not carry much muscle; at the same time it indicates a delicate constitution. This quality is produced in animals by great refinement in breeding, and especially by breeding from animals near of blood; in doing so we should remember that we are deviating from the natural characters, in a point connected with hardiness of constitution. The perfect touch in a feeding animal will be found with a thick loose skin, floating as it were on a layer of soft fat, yielding to the least pressure, and springing back to the touch of the finger like a piece of thick chamois-leather. This token indicates hardiness of constitution and a capability of carrying plenty of muscle as well as a sufficiency of fat. The physiological history of these tokens is as follows:—The cutis, or true skin, is that portion of the external integuments from which leather is manufactured; and is much more dense and elastic in some breeds than in others. Its external surface lies in contact with a layer of cellular tissue which intervenes between it and the muscle. This cellular tissue contains a larger or smaller amount of fat cells; and the mellow feel which is found in some animals arises from the resiliency or springing back of the cellular tissue in which the fat is deposited, on being touched. Where there is much 'mellowness' in a lean animal, it arises from the free circulation of the blood-vessels through the mesh-work; and where there is a hard feel, it arises from the cellular membrane participating in the hardness of the hide, and therefore being less capable of dilitation by the interstitial deposit.

"*Smallness of bone* is another indication of early maturity, since it must be evident that a breed of animals that will attain their full size of bone at an early age, will be a much more profitable breed to the grazier than one of slower growth.

"The *size of the head* of an ox affords another indication of a capacity to carry fat in an eminent degree. When the head of the bull approaches to the narrow elongated form of the female, he will be extremely docile, but he will have lost much of his masculine character, and his stock will not carry much muscle.

"*The ears* should be thin—coarse ears being a certain sign of a coarse breed.

"*The horns* should be fine—a coarse and thick horn being an indication of an ill-bred animal. Wherever there is a tendency in a breed to thick and coarse hides, the horns are generally formed coarse and thick also.

"*A thin neck* is another indication of a delicate breed, either in bulls or rams; a thick neck, on the contrary, indicating large muscles and a good constitution. *Proportion* is another sign or token by which to judge of the disposition of animals to carry a fair proportion of muscle. There should always be a proportionate union of *length*, *depth*, and *thickness*; no matter what the weight or size of the animal may be, these properties are indispensable, if the breeder's object is to obtain the greatest weight of meat on the most valuable points.

"The immense difference in the size of the different breeds of cattle or horses is beyond our control. Although man has produced wonders even in this respect. Generally speaking they assume a certain character, dependent on the food which they obtain—for where food is abundant they are found of a large size; and where deficient, they are found of a diminutive breed. But this truth holds good only as regards the different races and not the individuals, for were we to breed the Shetland pony on the best Lincoln pastures, it would take many hundred successive generations before his race would approximate to the size of the breeds that are natural to this district."

In the *rearing department*, Mr. Karkeek thinks "there is a great deal of mismanagement, even among our best breeders." He alludes to the practice of rearing animals, bulls particularly, without exercise, confined to narrow limits and fed on stimulating food—a practice which he deprecates, as tending to weaken the constitution and muscular vigor of the race,—although it is admitted that it may promote the secretion of fat, and induce early maturity. "But," he observes, "however desirable these qualities may be, depend on it, there are others of an opposite character which are also to be attended to—these are weight of muscle, and the capability of propagating their race—to produce all of which quite a different system must be adopted. There is a certain amount of exercise which muscles require to encourage their proper development and growth, that never can possibly be obtained by a young animal confined in this manner. The degree of activity in the nutrition of muscles depends in a great measure upon the use that is made of them; and thus we find that any set of muscles in continual employment undergoes a great increase in size and vigor, whilst those that are disused lose their firmness and diminish in bulk. Cattle require not such exercise as would harden the muscular fibre, but just so much as would keep the animal in a healthy state and prevent those enormous accumulations of fat which so frequently disfigure and so materially injure our very best breeds of cattle."

Mr. K. advises that—"During the first two years, as long as the weather will permit, the young bull should be allowed to range in the meadows [or pastures;] and when the autumn advances, and it becomes necessary to house him, we would recommend that the house or shed should be attached to a straw-yard, into which he may be occasionally turned during the mild days of winter."

In relation to the rearing of store cattle, Mr. Karkeck remarks that the same care is not required as has been recommended for breeding ones; "but even in this case," he says, "it may be worth the farmer's notice to be acquainted with the fact that nearly the whole of the fleshy part of an animal, which will afford any profit to him, is assimilated chiefly during the period of its growth." Thus, he thinks, "it should be the object of the farmer to force his stock on, during the period of their growth with such kind of food as will produce the largest quantity of muscle at the least expense."

In the commencement of this article, we spoke in terms of general approbation of Mr. Karkeck's essay; but on one or two points we are compelled to believe that practical observation conflicts with his views. It will be noticed that he speaks of small lungs as favoring the accumulation of fat—an idea which we think was first publicly put forth by Professor Playfair, in a lecture before the Council of the Royal Agricultural Society in 1842.

The importance of this subject justifies its being considered at some length. The theory alluded to seems to be founded in the fact that carbon, which is one of the elements of fat, and without which fat cannot be formed, is disengaged from its combinations in the blood, and is thrown out of the system in the act of respiration; or to explain the process more in detail, the venous blood which comes back to the heart is loaded with carbon, and this on being sent to the lungs by the heart's action, it there enters into combination with the oxygen of the air which is inhaled, and forms with it carbonic acid—the latter being expelled from the lungs in the act of expiration.

From this, the idea seems to be entertained that if the carbon of the blood is not consumed in respiration, it may remain in the system and be converted to fat, &c. In other words, the theory is, that the less the consumption of carbon by respiration, the greater will be the accumulation of fat from the food consumed. Prof. Playfair even went so far as to say in the lecture referred to, that—"if two pigs had the same quantity of food, and one had lungs of double the size of the other, that pig would only appropriate half as much of its food in the form of fat."

But in adopting the above theory, have all the important functions of the lungs been duly considered? It is admitted by physiologists that venous blood is charged with matter which renders it no longer capable of affording support to the system—it is in a degree poisonous. Hence nature has provided a means of purifying it, and restoring its life-supporting properties. The lungs constitute the laboratory for performing this purification, and it is reasonable that in proportion to their development and free action, will be the perfection of the process. Here the noxious portion of the blood is taken away and its place supplied by a substance which qualifies the remainder to nourish and invigorate the system.

Is it not certain also, that the full action of the lungs and a free inhalation of oxygen are essential to the proper action of the digestive organs? The imperfect digestion of animals having weak lungs, indicates this; and it is well known that animals in which fat has accumulated to such a degree that the lungs are compressed, and their inflation prevented, are able to digest but a small quantity of food, and their increase in weight is likewise very small.

It is proper to remark that many distinguished physiologists do not agree with Prof. Playfair in relation to the point under consideration. Dr. Cline says—"an animal with large lungs is capable of converting more food into nourishment, and has, therefore, a greater aptitude to fatten." With this Mr. Youatt also agrees. "On the soundness and capacity of the chest," (observes Mr. Y.,) "depend the size and power of the important organs it contains—the heart and the lungs; and in proportion to their size, is the power of converting food into nourishment." In another place he remarks in reference to the ox—"the broad open breast implies both speed and strength, and aptitude to fatten. A narrow chested animal can never be useful either for work or grazing."

Mr. Read, a veterinary surgeon of high distinction, also dissents from the theory of Playfair. He says:—

"I do not agree with Dr. Lyon Playfair that the lungs must of necessity be small when an animal first begins to fatten; but as the fattening process goes on the internal cavity of the chest becomes smaller, the action of the heart weaker, and the lungs diminish in size in a regular gradation, from various causes; first, from limited expansion; second, from absorption and by pressure of the surrounding parts; and lastly, from quietude never allowing their due inflation which the act of depasturation affords."

In support of the supposition that animals with large lungs do not fatten well, Dr. Playfair mentions that horses have large lungs and are nearly destitute of fat. On this Mr. Read remarks:—

"I well know, and not speculatively, that horses, if fed on meal and potatoes, or turneps, quickly and rapidly make fat." And he states further that on opening those which have died in consequence of having been put suddenly to work after being kept on this kind of food, he has "found them loaded with fat."

Another veterinarian, (Mr. Sparrow,) writes—"on the form and size of the chest depend the soundness, strength, and health of the animal. A capacious chest will afford room to well-expanded lungs; and in proportion to their expansion will they convert a given quantity of blood into a vital arterial fluid, and contribute to the nourishment of the frame."

For our own part we do not think the theory that animals which have naturally small lungs are most disposed to fatten, is sustained by practical observation. The external form, the roundness and capacity of chest, which those animals possess which are commonly most disposed to fatten, certainly indicates a corresponding internal structure or large vital organs; and indeed whenever we have had the opportunity of examining such animals internally, we have always found the lungs comparatively large unless when the animal has been fully fattened. We readily admit that those animals which at the time of being slaughtered, are found to have accumulated fat in an extraordinary degree, usually have small lungs, heart, &c.; but we feel confident they become small during the process of fattening, as described in the quotation above made from Mr. Read.

But even if it were demonstrated that small lungs are most conducive to the formation of fat, it would by no means follow, tha. it would be wise for the farmer to breed cattle with this organization. The animals must be capable of exertion—they must be able to procure their food by grazing, often in situations requiring considerable muscular strength and activity—they must be required to draw the plow and perform other farm-labors—and they must possess a hardiness of constitution that will adapt them to the climate in which they are placed. All will admit that for these purposes the blood should be properly decarbonized, that it may receive from the atmosphere a due portion of that life-giving principle which alone can insure the health of the system, or infuse into it power and energy to perform strong muscular action—effects which can be produced only with a full development, soundness, and healthy action of the organs of respiration. This point, upon which physiologists are agreed, is so abundantly supported by experience and observation as to render any further attempt at illustration unnecessary.

That a tendency to fatten readily and to any desirable extent, is not incompatible with strength of constitution and muscular vigor, is practically demonstrated in certain breeds of cattle—a striking example being furnished by the *Kyloes*, or West-Highland cattle of Scotland. In hardiness and activity, these cattle, according to the accounts given of them, are scarcely surpassed by the buffaloes of our western prairies; yet it is the opinion of many whose experience well qualifies them to judge, that their fattening properties are not exceeded by any other race; and the superior quality of their beef, in the markets where it is known, is universally admitted. We do not mean to say that these or any other animals, acquire fat to a great extent while in very active or laborious exercise; but we refer to them as showing that a constitutional ability to perform or endure all that can reasonably be required of cattle, is not inconsistent with good fattening qualities.

In a future number we propose to make some remarks on the subject of breeding from near affinities, or the "*in-and-in*" system as it is called, which has been referred to in the remarks we have quoted from Mr. Karkeck.

THE DAIRY—BUTTER MAKING.

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LUTHER TUCKER, ESQ.—I enclose an extract from a report on butter, made to the R. I. Society for the Encouragement of Domestic Industry. If you think it worth inserting in your valuable paper, let it appear as early as possible. The rock salt must go up this winter, to avoid the heavy canal tolls, and the small white oak kegs must be contracted for soon. Half the winter's butter used in Rhode Island comes from the state of New-York, and its price is diminished from four to six cents a pound by the use of Salina salt. This is a heavy tax on the farmer.

Butter made agreeably to the following directions sells in the Providence market readily—in large 100 lb. kegs, at 25 cents per lb. If in the small kegs, of from 25 to 50 lbs., it brings from 25 to 27 cts. The same butter salted with New-York salt, would only be worth from 19 to 22 cents per lb.,—and by the first of April it would be bitter and rancid. Your salt is not preservative; it will not answer for beef, pork, or fish. Why should it be used for so delicate an article as butter. Its bitter taste, and its easy solution in damp air, are no objections to its use for cheese.

STEPHEN H. SMITH.

Smithfield, (R. I.) Dec. 23, 1845.

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BUTTER MAKING.

MILK APARTMENTS, &C.—The milk cellar should be deep, well ventilated, and dry; the bottom covered with stone flagging. Well rammed clay is preferable to bricks, as they will absorb milk, and other liquids that may fall upon them; they cannot be cleansed, and will soon contract mildew, the smell of which, like the odor of cheese, vegetables, fish, or foul air of any kind, will be imparted to the cream and butter. Over this cellar should stand the dairy room, with shelves to set milk upon in *cool* weather; the cellar to be used during the extremes of heat and cold. The temperature of the milk apartment, if possible, should never be above 65 degrees nor below 45 degrees. Set-kettles should not stand in the dairy-room: neither should churning, cheese-making, or cleansing milk vessels be done there, but in a convenient room near by.

Cream may be kept good much longer, if it be kept in a white-oak vessel, with a tight cover, and a faucet or tap near the bottom, to draw off the milk, when it settles, before the customary daily stirring. The quality of the butter is much improved by this management. If the milk be not drawn off, and it be churned with the cream, the butter will be longer in coming, and it will show specks of sour curd, taste like cheese, and will soon become rancid. Butter will come quickly, at all seasons of the year, if the cream be of a temperature of from 60 to 75 degrees; to this end, use hot water in winter, and ice in summer, but never add either to the cream in or out of the churn.

SALT.—Pure salt chrystalizes into perfect cubes. All other forms of chrystalization found in common salt, arise from impurities; those of a needle shape in Liverpool bag, or blown salt, indicates the presence of lime, magnesia, &c. Epsom and Glauber's salt are frequently found in small quantities; in the process of making salt they chrystalize last; when water is added, or on exposure to damp air, they dissolve first; hence washing salt purifies it. One great cause of the failure in making good butter, may be traced to the use of impure salt.

Rock salt, and the large lumps of Turk's Island salt, washed, dried, and finely pulverized, are preferable to all other kinds, being highly preservative, and hardening the butter, so that it will be sooner ready to work over in warm weather. The Liverpool bag or blown salt, the Salina salt in small bags, from New-York, and the fine part of every kind of imported salt, contain a great portion of impurity; they are not preservative; do not harden the butter, and give it a bitter taste.

Less than one ounce of pure salt, is sufficient for a pound of butter; (many put in half an ounce; in all cases leave out sugar and saltpetre.)

In the manufacture of cheese, a preference is sometimes given to Liverpool bag or blown salt. This salt contains salts of lime and magnesia, which attract moisture from the air, and have the desirable effect of softening the cheese; and the pungent, bitter taste which they impart to it, is an improvement in the estimation of some.

GENERAL REMARKS.—The cream should not rise more than 36 hours; it should be sweet when taken off and sweet when churned; yet there is a degree of maturity, to be acquired by keeping. The kegs, for packing butter should be made of white oak, bilging in the form of casks, for the more perfect exclusion of air, and convenience of transportation. If the butter is not to be sent to a warm climate, or a foreign market, let the *bilging* kegs have movable covers to accommodate inspection; they should be soaked in a strong brine, made also of *pure salt*, in order that justice may be done to the purchaser, in tare; and to save the butter from beins spoiled, to the depth of one or two inches all round from its contact with dry wood. In case the wood is anything but white oak, there is danger of its giving an unpleasant taste to the whole. For the convenience of families, the size should vary from 25 to 50 pounds. A large keg of butter is exposed to the air for a long time while on broach in a small family; the bottom in consequence becomes rancid.

The consumer will cheerfully pay an extra price for 100 pounds of butter, packed in four kegs instead of one. No salt should be put on the sides, bottom, or between the layers. If the kegs are made with covers, put a cloth over the top and cover that with pure fine salt. Keep a cloth wet with strong brine, over the butter while the keg is filling, to exclude the air. The practice of washing butter is not approved of in Europe; it destroys its fragrance and sweetness by dissolving the sugar of milk, which, it is said, is always present in good butter. It is practiced in Holland, when the article is designed for exportation to India; then the operation is performed with cold, strong, limpid brine made of pure salt and pure water; water that has lime in it will not answer, as the lime is readily absorbed by the butter.

To exclude the air more effectually during the process of putting down, let a little melted sweet butter be run into the cavity, where the bottom head and staves come together, then after each layer is completed let the dairy woman pass her finger round so as to press the butter hard and close against the side.

MR. MITCHELL'S LETTERS —NO XII

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AGRICULTURE AND VINEYARDS OF SWITZERLAND.

Paris, Nov. 14, 1845.

Luther Tucker, Esq.—My last spoke generally of the agriculture of Switzerland, from which it is impossible for us to take many practical lessons, except indeed, this—the best lesson in the world, but which most are slow to learn—that however forbidding may be the circumstances of a man's lot, so far as exterior things are concerned,—industry and prudence will in almost every instance secure him a livelihood. The Swiss peasant, some thousand feet above the level of the sea, with so little herbage for his winter's flock that he cuts it with a sickle, and carries it home in a blanket—with so little grain in his fields, that he with his dame and their daughters pick the heads from the stalk, and carry it home in their aprons, (a sight I have often seen)—liable too, to have his little grain torn up by the mountain torrent, or his chalet and his all crushed by the avalanche, yet gathers his harvests contentedly, for they are sufficient—nor quarrels with nature—nor, fortunately, once dreams of those rich meadows in our western world, waving with luxuriant vegetation, and harvested only by decay.

Among other products of the country not unworthy of mention, if I may judge by the assiduity with which the crop was gathered, is the English walnut, as we call it, though it is I believe indigenous to Switzerland. The leaves and fresh shoots of the white ash are in many parts, carefully collected and dried, to help out the stock of winter's fodder. A small wild apple is frequently met with in the lower mountains of the canton Vallais, of an exceedingly acrid taste. I could not learn that any use was made of it. One is astonished to see the gentleness of the flocks quartered in the mountains. In passing over the Col de Balme from Martigny to Chaumony, I met with a nice flock of their long-wooled sheep in the forest. I offered my hand to invite them to me. One by one they came up, crowding about me—some licking my hands, others smelling at my knap-sack, and it was with some difficulty that I could rid myself of their favors. I suppose it arises from their rarely seeing a person in those solitudes, and generally only the shepherd who comes to bring them their weekly allowance of salt. I have spoken of the minute division of property into small parcels, and each one's quiet possession of his own. It was very observable at Chamounix, where after harvest, the cows are pastured over the valleys, and the cows of each one confined to their particular bit of herbage, by merely laying down sticks along the line of division. And so well instructed seemed the animals in the method, that they rarely took a nip outside these slight bounds. In such event, however, some little urchin was sure to start up from the neighborhood with a switch, and enforce the rule. At the period of my visit, the inhabitants were busy in harvesting their potato crops. The method has been previously described. They were not free from disease, and nearly one-third were thrown aside at the gathering, the trouble precisely similar to what I had observed previous to leaving America. The sad failure of the crop in Ireland, and its general failure throughout Europe, will have received your notice before this will meet the eye of your readers. The evil can hardly be overrated, and its issues may prove most disastrous. Such issues are not unfeared even in Switzerland, where the potato in many districts is as much the chief aliment as in Ireland. Many a peasant's dinner have I seen made out of potatoes and milk only, and many are the regrets which I have heard expressed in no unmeaning terms, at the calamitous event. Projects upon projects here as with you have been proposed and exploded, for staying or remedying the evil.

The country up the Rhone for many miles above Lake Geneva, is exceedingly level and fertile—of course I speak only of the valley between the mountains. The crops are almost as various as in New-England—orchards abound, though the fruit is not superior; and the wild grass may be seen growing in the meadows to the height of 6 or 7 feet. It is useless except for litter. Near the lake, and upon the edges of the hills, the vine is cultivated with great success. So profitable even is every little spot that faces the sun, that cliffs are thrown down, and rocks are covered with earth to give place for culture. Upon the northern shores of the lake the cultivation of the vine is almost exclusive. The wine however is not held in high esteem, and the enormous rents are due only to the abundance of product. The purple grape in all this region, is rarely seen, and in the canton of the Vallais it enjoys the patronage of the government, having among other marks of distinction, a guard appointed to protect it from depredation,—to which I may add, its white neighbors are exposed at the hands of every passer by. I have previously spoken in unfavorable terms of the appearance of the European vineyards—an exception is to be made, however, and a very full one, in favor of one at harvest time, loaded with rich purple clusters—than which there can be no richer sight in the whole vegetable world. The grapes are gathered by men, women, and children; for the most part gathered into funnel shaped tubs, carried upon the backs of the men.

The methods of pressing are various—some resembling strongly our cider presses. I left Switzerland as I entered it, by way of Geneva, around which the country is cultivated in the best style, and not in a few instances under the direction of English landlords. Its hedges are like English hedges, and its roads like English roads. The tastes of its inhabitants have too a smack of rurality. There are public walks shaded with the richest native trees, or a public garden where the poorest may study botany better than in books. When shall we have such things? When we are wiser surely; and when we are richer, surely—for we shall be richer for having them. (It is the steamer's last day, and I am hurried.) Truly yours, D. G. Mitchell.

POTATO FLOUR.

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Potatoes which are unsound may be converted into starch, and thus saved from total loss. In England and Ireland, where the ravages of the potato disease have been seriously injurious, it has been attempted to preserve the valuable properties of the root by extracting the farina of flour, by various processes. It is converted into "British arrow root," which is nothing more than starch in a nice form. The Farmer's Magazine gives the following as the most perfect process of obtaining the flour:

1. Thoroughly wash the potatoes.
2. Peel away the skin without cutting off much.
3. Grate the peeled potatoes finely into a pulp.
4. Place the pulp on a hair sieve, pour water over it, stirring it about well, till the water ceases to pass with a milky appearance.
5. The pulp left on the sieve may be thrown away, [or given to animals] and the milky water set aside to settle.
6. When the particles of starch have all settled, the water should be poured off, and fresh water added; the whole stirred up afresh and allowed to settle again.
7. These washings may be repeated four or five times, when the starch will have assumed the character of arrow-root, and will have become white as snow, whilst the water will now be perfectly clear.
8. The pepared flour must be thoroughly dried and may be kept for any length of time in jars or casks.

The flour or starch may be dried by being spread on a cloth and laid on a board in the sun, or it may be dried in shallow vessels in a warm room; or it may be dried in stoves or ovens. Prepared in the manner described, the flour may not only be used as starch, but may be used with wheat flour for making bread, puddings, &c. It is also used as arrow root, and is a delicate food for weak digestions, for children, and for the sick.

MR NORTON'S LETTERS.—NO. XX

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ENGLISH FARMING.

Laboratory of Ag. Chemistry Association,
Edinburgh, Nov. 27, 1845.

L. LUCKER, ESQ.—During the earlier part of this month, I spent nearly a week, in company with two other pupils of Prof. Johnston, in travelling across the northern part of Northumberland and Cumberland, from North Shields to Carlisle.

In giving a brief sketch of our progress, I shall only have space to mention those things that more especially interested us. Between North Shields and Newcastle, the country seems tolerably fertile, but wet in many places. Some of the farms bore evidence of skillful management. On the south bank of the Tyne, I was surprised to find that none even of the neighboring farmers seemed to make use of any of the kinds of refuse from the extensive Jarrow chemical works. Immense quantities of impure sulphate of lime, (gypsum.) formed in the carbonate of soda process, are thrown away. Pure gypsum is so cheap that this substance would not pay for transportation to any distance; but those who live near might surely avail themselves of it.

Hexham was our first stopping place after leaving Newcastle. I have spoken of the Tyne up to this place, in a former letter. We drove the same day 7 or 8 miles from Hexham up the banks of the North Tyne. We here saw some farming that, so far as our experience went, we unanimously decided to be superior to anything in Durham. I suspect that the Tyne side farmers owe much of this superiority to natural advantages. The soil is not so stiff as that of Durham, and generally lies so as to ensure in a great degree natural draining. Some of the fields of turneps were particularly fine, and from the appearance of the stubble we judged that the grain crops had also been very good; though the quality was somewhat injured by a long continuance of wet weather.

High up the North Tyne, we came into a wilder country, and visited the farm of Mr. Ridley, called Park End. He is chiefly a stock farmer, and keeps his herds during the summer among the hills and on the moors, bringing them down during the winter. Few of them had come home at the time of our visit, not more than twenty. His stock is nearly all Durham, and I was surprised by the size and beauty of some of these animals, which had been always kept on poor, bleak moors, without shelter. Though of course, inferior to what they would have been if kept up and fed highly, they were still large of their age, and promised to attain a very good weight, showing that the full-blooded Durhams can *rough it* if necessary. Mr. R. is quite a pig fancier, and has a considerable variety of the most approved breeds. We only had time to walk through one or two fields; these needed draining; the pastures were mossy, and required top dressing in addition to the drain. We found the potato disease doing great injury here as elsewhere, several persons estimating that about one-third of their crops were affected.

The next day after our return to Hexham, we were upon the farm of Mr. Harbottle, and there found the disease worse than in any place we had visited. He himself told us that not one in a thousand was sound, and on examination of the heaps we did not find even one untouched. He has about 40 tons, and is now feeding his horses, pigs, and cattle upon them, with no bad effects. The best thing he could do, would be to convert such as he cannot soon feed out into potato flour. It can be done at a small expense, and is infinitely preferable to wasting the time in vain attempts to preserve such a large quantity of infected tubers.

On our way from Hexham to Carlisle, by railway, the greater part of the distance was over a high and somewhat bleak country, except on the very borders of the streams, where were uniformly fine farms and large crops. Some of the Swedish turneps near Hexham, were quite remarkable. We saw in some places, but not many, piles of draining tiles, in this climate the indispensable preliminaries to anything like thorough improvements. Another good sign was the presence of lime kilns wherever any limestone appeared at the surface. Near Carlise, the appearance of the country greatly improved, and we noticed some particularly good pasture fields.

After two or three days at Carlisle, we crossed the country, 94 miles, to Edinburgh by coach. Some of the country on the banks of the Ettrick and Tweed was very beautiful, and showed evidence of good farmers. The day was one of the worst that even this climate can produce, cold, windy, and foggy, with a pelting shower once in about half an hour. This may have had some influence in our decision, at which we unanimously arrived, that the greater part of the country from Carlisle to Edinburgh, was wet, and that the farming generally was not such as should exist in Scotland.

With the present letter I must close a series which has extended through a period of eighteen months. I am about to make a short tour upon the Continent for the purpose of seeing some of the most celebrated laboratories. My stay in each place will be brief, as I intend returning home early in the spring, and I shall therefore have no time for any writing but such as is absolutely necessary. Your columns have enabled me as it were to keep up a communication with my country in general, in addition to private correspondence. I should be quite satisfied to know that your readers have experienced half the pleasure in the perusal that I have in the writing of these letters. Hoping again to be your contributor, in our own country,

I am very truly yours, JOHN P. NORTON.

KITCHEN CHEMISTRY.—No. I.

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VINEGAR.

PRINCIPLES.—If a solution of pure sugar in water, be carefully excluded from the air, it will remain perfectly unaltered for any length of time. If the air have access, it gradually becomes sour, but no alcohol is formed. But if some organic substance be introduced which is itself in a state of slow decomposition, the particles of sugar partake of the same change, and alcohol is the result. Yeast is specially active in inducing this kind of fermentation; it is also effected by blood, white of egg, glue, and flesh, if they have begun to putrify. But the most important substances in practice, are vegetable albumen and gluten, which exist in all fruits and seeds, differing only in character in different plants. If the fruit remains entire and uninjured, the air is excluded, and the gluten is unchanged; but if it be crushed or broken, air has access, oxygen is absorbed, and the fermentation of the fruit commences by the combined action of its sugar and gluten. The necessity for oxygen is only a the commencement; after fermentation has begun, it proceeds through the whole mass, though the air be excluded. Yeast is nothing more than a mass of vegetable gluten (mixed indeed with other substances) after the slowly fermenting process has actually commenced.

As a solution of sugar is not converted into alcohol, without the addition of a third fermenting substance, so a solution of alcohol is not converted into vinegar, without such intervention. Cider in this country, malt liquors in England, and fermented grape-juice in wine countries, are used for making vinegar. All these contain an abundance of organic matter, which induces fermentation; they absorb oxygen from the air, and give off hydrogen in the form of water. Hence, unlike the vinous fermentation, the presence of air is essential through the whole process of making vinegar. But it must not be largely admitted, lest it carry off certain volatile parts essential to success. The mucilage and other organic matters, after decomposition is effected, settle to the bottom, in a gelatinous mass, termed *mothers*.

PRACTICE.—In England, for domestic purposes, vinegar is prepared on a large scale, from a mixture of barley or malt with water, by keeping the wash exposed in open vessels to the air, in rooms heated to a particular temperature. The fermentation is promoted by the addition of a small portion of acetic acid.

An excellent mode also consists in exposing to the air, one part of brown sugar by weight, with seven parts of water, and a small quantity of yeast, in a cask whose bung-hole is covered by gauze to exclude insects, for some weeks to the action of the sun's rays. Fermentation is promoted and the quality improved by the addition of grape leaves.

An acquaintance made excellent vinegar for home use, as follows:—A gallon of molasses and a barrel of cider were mixed, and warmed in a large kettle, after which the mixture was put in a barrel, with a few sheets of brown paper, and kept in a warm place with the bung open, through which a stick was inserted for stirring it, to break the scum and admit the air. The vinegar was drawn as needed, and the deficiency supplied by occasional additions of cider, which is in turn converted into vinegar.

All these modes require several weeks at least. A great improvement in this respect has been made, on purely scientific principles, by which good vinegar may be made in twenty-four to thirty-six hours. A barrel is filled, except a vacant part at the bottom, with wood shavings. The top is closed by a pan, which fits into it, the bottom of which is preforated by a number of small holes, and through these short threads are passed, to bring down the liquid more rapidly. The shavings, before using, are well steeped in vinegar, which of itself strongly induces fermentation. Near the bottom of the barrel, its sides are perforated by a number of holes half an inch in diameter, for the admission of air, which passes up through the shavings, and escapes through several tubes, passing up through the pan and through the liquid in it. An alcoholic liquor, mixed with about a thousandth part of yeast or honey, is then poured into the pan, and it trickles down the orifices by the threads, spreads over the shavings, and thus has its surface very largely exposed to the air. Before pouring into the pan, it is heated to about 75 degrees, the rapid absorption of oxygen among the shavings soon raises the temperature to 100 degrees; the heat causes a current upwards by the holes in the barrel, through the shavings, and by the tubes in the pan, by which the supply of oxygen is kept up. The liquid passes down, and escapes through a pipe at the bottom. The operation is repeated, and after passing through in this manner three or four times, the liquid is converted into excellent vinegar; the whole time not exceeding twenty-four to thirty-six hours.

POTATO CULTURE.

WILLIAM R. LATTA, of Virginia, informs us that he has tried the plan of cutting potatoes in the middle and planting the two ends separately. The result has been that the sprout or "point" end has produced most, but the "stem" end has given potatoes of the best size, and far superior to those of the "point" end for table use. Mr. L. also states that he has tried the plan of thinning the tops of potatoes. His practice had been to plant the argest potatoes without cutting, but noticing that they produced a large proportion of stalks or tops, he took a part of a field of potatoes and thinned alternate rows. The number of stalks to the hill was from ten to twelve, and they were thinned to four and five. The effect was to lessen the yield in the rows that were hinned, but the potatoes were of better size and quality.

WINTER FOOD FOR DOMESTIC ANIMALS.

IN most parts of the northern states, a very large portion of the year requires the feeding of dried or stored food to domestic animals. Usually one half of the last month of autumn, the three winter months, and at least two of the spring months, must be passed without the aid of pasture, throughout the more northern regions of our country, amounting to almost half of the entire year. It hence becomes one of the most important of all qestions in farming,—what are the cheapest and best kinds of food for the subsistence of domestic animals through this long and costly period?

The article which stands at the head of the list, as being the most largely used as well as the most important every way, is meadow-hay. But auxiliaries are needed; not only because the hay crop is often greatly diminished by drouth, but even when abundant, a mixture of other substances contributes to the health, comfort, and thrift of the animal. Greater cheapness, too, is attained by a portion of other kinds of food. An examination and comparison of these, hence become a matter of considerable importance.

In addition to hay, may be mentioned,—as among those substances which are either in common use, or should be,—carrots, ruta-bagas, straw, beets, potatoes and grain. The propriety of the use of these may be judged with tolerable correctness, by taking their respective nutritive values, together with their cost in raising, and comparing them thus with hay. In the following table we have taken a few of the more commonly cultivated roots, and deduced their nutritive value from the actual experiments of a considerable number of distinguished agriculturists, the mean or average of the results they arrived at being taken. The figures indicate the number of pounds of each, needed to be equal to 100 lbs. of hay.

Carrots,	276
Ruta-bagas,	300
Mangold-wurzel,	317
Potatoes,	201
Common turneps,	494

It will be perceived that potatoes are the most nutritive, carrots next, then ruta-bagas and mangold-wurzels are nearly equal, while common turneps are far behind all the rest. Then as to the expense of raising. The same degree of fertility in soil will give about 250 bushels of potatoes, 500 of carrots, 600 of ruta-bagas, and 700 of mangold-wurzels. This is mere estimate, but is probably not far from the truth. The cost of seed and planting is greater for the potato than the other crops, but the after culture rather less; on the whole, the expense of raising an acre of each will be nearly equal. The cheapness of seed and ease of sowing are in favor of ruta-bagas, but on cloddy soils this advantage is more than balanced by danger from the turnep-fly. It is understood as a matter of course that in these estimates, the best culture is to be given,—that is, all the roots but the potatoes are sown in drills, from two to two and a half feet apart, not more,—that they are hoed as soon as they are up or before two inches high, which not only greatly reduces the labor, but allows an early and vigorous growth; and that clean, well tilled, and fertile land is selected for them, and not rich waste land loaded with the seeds of millions of weeds, which without the cost of much labor, get the ascendancy, and choke down the young crop.

Taking all these circumstances into account, it will be perceived that carrots, ruta-bagas, and mangold-wurzels stand nearly on equal grounds as to merits. But the far greater avidity with which horses will eat carrots, the excellent butter which results from their use when fed to cows, and the little injury they receive from frost, even when the crop or a part of it is left to winter in the ground where it grew, give this crop most eminently the preference.

Now for the cheapness of roots as compared with hay. A ton of hay, according to the experiments already mentioned, is equal to 5500 pounds of carrots, which at 60 pounds to the bushel would be 91 bushels

One acre of carrots, then, or 500 bushels would be equal to 5¼ tons of hay. According to our own experience, such a crop may be easily raised and harvested for fifteen dollars, which would place the carrots as a cheaper food than hay, if the hay were only three dollars a ton. But the superiority of the condition of horses and cattle, when fed freely on carrots with hay, is an additional advantage.

Straw.—The following shows the comparative nutritive properties of straw, by indicating the number of pounds needed to be equal to 100 lbs. of hay. But it must be observed that these results will vary greatly with the ripeness or freshness of the straw, and other circumstances connected with its growth or condition.

New wheat straw,	272
Oat straw,	166
Barley straw,	176
Pea straw,	169
Clover hay,	94

But as the quantity of straw is wholly dependant on the quantity of grain raised, and is in fact only a secondary crop, the amount which each farmer possesses can only be controlled by economy in saving what he has, which cattle will eat freely, if mixed with hay and chopped, or alone, unchopped, if well salted. For further hints on this point, see p. 381 of our last vol.

There is another item of cheap and nutritious food in the shape of corn-stalks, sown for fodder. The value of common corn-stalks, raised for the grain, depends greatly on the quality, and the amount which cattle can consume without refuse, depending on the size of the stalks, variety of corn, &c. But when the corn is sowed thickly for fodder alone, all is consumed, and a ton is probably fully equal to a ton of hay. Five tons *at least*, (according to repeated trial of the writer,) may be raised as follows on an acre of respectable fertility, say rich enough for 500 bushels of ruta-bagas. Plow and harrow as usual; furrow one way two and a half feet apart with one horse; strew three bushels of corn to the acre along these furrows from a basket; cross-harrow to cover the corn; pass the cultivator two or three times along the rows, but not hoe them; and mow with scythes, dry, and draw in. The whole expense, including interest on land, need not be more than twelve dollars,—placing the cornstalks, which are more palatable for cows than any hay, at less than two and a half dollars a ton. There is no exaggeration about this, but is the result of repeated trial.

An objection is made to the extensive use of roots, on account of the difficulty of keeping them and feeding them out through winter. But this objection must disappear at once if a good *root-cellar,* close at hand, is constructed. The farmer must have a barn for his hay, and he must have a cellar for his roots; the latter need cost no more than the former. The objection, therefore, should vanish.

Another objection is, that animals do not like roots—will not eat them—or it is hard to learn them to eat. This difficulfy may be variously obviated. Cattle scarcely ever refuse any kind of roots. Horses and sheep reject them at first; but perseverance, short allowance, or chopping up fine and mixing with meal, and then gradually returning to a coarser chopping, and a diminished quantity of meal, will usually do the work. We have learned old horses, which totally refused ruta-bagas at first, to gnaw down whole ones with great avidity, and a neighbor regularly wintered his store hogs mainly upon them without cooking.

The comparison of different kinds of grain, with hay, according to the before mentioned experiments, is as follows:—

Corn,	52
Barley,	53
Oats,	67
Peas,	47
Wheat,	46

Eighteen bushels of corn, will therefore be equal to one ton of hay; the farmer can judge from prices whether a loss or gain would result from a free or scant use of this grain. He can also apply the same rule to other kinds of grain.

On reviewing these estimates, it will be perceived that the greatest loss which farmers usually sustain, is from the neglect of the free culture of root crops, and of corn-stalks for fodder. An abundance of roots at hand would enable the farmer to save one-half of the hay usually fed to cattle,—or one quarter of the whole cost of feeding them. An equal saving would result from the use of corn-stalk fodder. Taking, then, these two articles together, and not forgetting the increased amount of butter and milk and the improved condition of the animals, it is probable that one-half the expense of wintering cattle would be saved by an improved system; and perhaps equal advantages would result in the keeping of sheep and horses. Making allowance for difficulties in introducing such a system in poor soils or unfavorable localities, and calling the gain only one quarter,—what would be the total gain in the state of New-York alone? There are in the state, according to census, about 470,000 horses, 1,900,000 cattle, and 5,000,000 sheep; the total expense of wintering them cannot be less than twenty millions dollars, at a low estimate; one quarter of this would be *five millions,* saved every year, in one state.

The saving which we have made ourselves, and which we have seen successfully practiced by others, satisfies us that these estimates are very moderate, and that this conclusion arrived at is not speculation, but positive and existing fact. The great assistance which such a system would lend, to fertile and compact culture, instead of skimming and surface work, by increasing manure and fertility, should induce every enlightened agriculturist to labor assiduously for its general extension.

ADVICE TO WESTERN EMIGRANTS.

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We have received from Andrew Stone, M. D., of Crown Point, Lake Co. Ia., an article under this head. He thinks a great error is committed by emigrants in general, in not properly considering the difference in localities in regard to healthfulness. The "great rush," he says, is for *rich* land, almost regardless of other circumstances. These rich lands lie mostly on the borders of streams, which, Dr. S. says, are very frequently the most unfavorable to health. He remarks, very truly, that—"No one in a new country can be better capable of knowing where sickness mostly prevails, and what situations are most likely to be healthy, than a long settled and experienced physician. For seven years," he continues, "I have labored assiduously in the profession, in the west. Six years previous to the last, were spent on Spoon river immediately at its intersection with the Illinois river in Illinois. From accurate observation and inquiry, I can vouch for the fact that nine-tenths of the cases of sickness I have known during this time were confined to the borders of rivers and streams. And what is another important fact to be kept in consideration, is, that the sickness occurring on the streams is far more difficult to manage, and is much more fatal than the sickness which occurs on dry lands at a distance from streams."

The cause of this, Dr. S. thinks, is the miasma from the decomposing vegetable matters of these alluvial soils, which, under the intense heat of the summer's sun, rises and fills the air—rendering it "almost a deadly poison." "Let me advise you who are coming to the west," says Dr. S., "to choose a high, dry, and rolling piece of ground, at a considerable distance from streams; avoid also, ponds, and stagnant water of any description. You had better go a few miles further to haul your produce to market, or raise a few bushels per acre less, and enjoy health, than choose an unhealthy situation with the consequences I have named." He gives a melancholy picture of the sufferings the emigrants sometimes endure. He says—"In one family, I have seen nine persons sick at one time—one dead, and another dying. At the same time that this fatal sickness was prevailing on the river bottoms, there were families living at the distance of half a mile, above the bluff, who had there for years enjoyed good health."

SHEPHERD'S DOG.—Fig. 13.

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THERE are several breeds of dogs which may be trained to watch and drive sheep. We have seen at least three varieties which came from England and Scotland, one or two from Germany, and a very large kind from Spain. Which of all these varieties Buffon alluded to as being in his opinion the root of "all the canine race," we have no means of knowing; but the English sheep-dog, with a sharp pointed muzzle and long glossy hair, has more the appearance of a pure original stock, than any we have met. The above figure seems to have been taken for a rough-haired dog, such as we have in two or three instances known brought from Germany. Mr. Bymler, the principal of the German community at Zoar, Ohio, had sheep-dogs of a similar appearance, a few years ago.

Many shepherd's dogs exhibit a wonderful sagacity in the performance of their task, and no animal can be considered superior to them in usefulness to man. But we have not room to relate here, any of the remarkable instances which are recorded of their half-reasoning powers.

There is a breed of sheep-dogs in Spain, which is at least three times as large as the common English sheep-dog, and are said to unite the intelligence and faithfulness of the latter with a courage and strength superior to the mastiff, or any other dog. We saw an imported dog of this breed, several years since, and we are certain that we never saw any other dog whose size and form indicated such amazing strength. Some of these dogs were imported into this country, over thirty years ago, and in the third volume of the Memoirs of the Philadelphia Society for Promoting Agriculture, we find a letter from P. Bauduy, of Delaware, describing the Spanish dog *Montagne*, of which he was the owner. The description is accompanied by a copper-plate engraving, and from the explanation given in connection with the plate, it appears that this dog at eighteen months old, measured two feet and eight inches from the bottom of the fore foot to the top of the shoulder, and hree feet and eleven inches from the nose to the end of the rump. The breed is not only ferocious towards wolves, to guard the flock against which they are kept in Spain, but their antipathies are equally as strong towards other dogs which offer any injury to the sheep. Mr. Bauduy, in the letter above mentioned, states that his dog was endowed with all the good qualities of of other dogs, "possessing immense strength, great mildness in his usual deportment, though ferocious towards other dogs. I can say, without exaggeration, that at least twenty dogs have heen killed in my barnyard on my farm by him." * * * The natural instinct of this animal is to guard sheep against wolves and dogs. No other training is required but to keep them constantly with the flock, the moment they are from the litter, till they are grown." The color of Montagne was perfectly white; the one we saw was yellowish white, and the breed is said to range from these colors to dun brown. We would advise the flock-masters of our western states, whose sheep are in danger either from wolves or prowling dogs, to import the Spanish speep-dog, as affording the best possible protection to their flocks. We may give a cut of the Spanish dog hereafter.

MAPLE SUGAR.

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THE superiority of fine white maple sugar, over the dark chocolate colored article often seen, and the higher price, and readier sale it commands in market, render very desirable the knowledge of the cheapest and best mode of manufacture. Some of the best sugar, which has obtained the premiums of the State Agricultural Society, has been made white and pure by redissolving that which was first made, subjecting it to the purifying process, and again evaporating; and in making the very best this process has been repeated, making it necessary to evaporate three times, before the sugar has become perfectly white. Some was exhibited at the State Fair at Utica, which, by the use of the strictest cleanliness throughout, and evaporation in pans, was as white as loaf sugar, with only one repetition of the evaporating process.

One of the heaviest drawbacks on the general manufacture of maple sugar, is the amount of fuel consumed; and this must of course be greatly augmented, where two or three evaporations have to be employed. The following method, which may not be generally known, obviates all this difficulty, at the same time that it affords sugar equal in every respect to the whitest loaf-sugar of commerce. An individual, of very moderate means, well known to the writer, made over a hundred pounds of the purest white, in one season.

The tubs for collecting the sap are perfectly clean—and are scalded with lime-water before using. The tub or reservoir in which the unboiled sap is kept is treated in the same way, and is kept constantly covered to exclude dust; if warm weather comes on during the sugar season, lime, equal in bulk to a hen's egg for a hogshead of sap, is put in this tub. The sap is poured into it through a strainer, and the strictest cleanliness observed in every part of the operation.

When boiled down sufficiently, the syrup stands over night to settle. It is then carefully poured off the sediment, through a strainer of flannel. The sediment is redissolved in water and boiled again. The strained syrup is boiled down till thick enough for chrystalizing.

It is then put in tubs, till cold and hard; holes with a gimlet are then bored in the bottom, and when all the molasses is thus drained off, cotton or linen cloths of some thickness are laid on the top of the sugar, and kept wet constantly. They thus keep up a constant and regular supply of water to the sugar beneath, gradually soaking down through the chrystalized mass, and dissolving what molasses and other impurities remain, which drain off below, and leaving the sugar perfectly pure and white. Several weeks are usually required for the completion of this process, but the labor is light.

LARGE CROPS.

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Mr. Tucker—From the proceedings of the annual meeting of the Oneida county Ag. Society, with which I have been furnished by the Secretary, I gather the following statements of the product of the fertile and well-managed lands in Oneida. Premiums were paid as follows:—

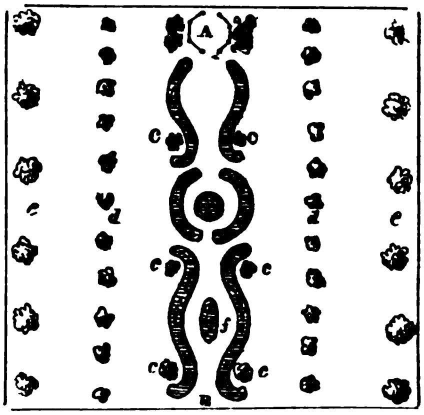
On Winter Wheat.	Product per acre.		Profit.	
	bush.	lbs.		
1st prem. to E. Rivenburg, Vernon,..	66		$44	25
2d " S. H Church, "	56	54	53	32
3d " D. Skinner, Deerfield,	41	9½		
On Spring Wheat.				
1st prem. to R. Eells, Westmoreland,	34		31	00
2d " E. Dayton, Vernon, ...	28	40	19	60
On Corn.				
1st prem. to C. W. Eells, Kirkland,.	89	5	36	43
2d " L. Warner, Vernon, ...	79	48	18	33
3d " L. T. Marshall " ...	75	12	24	60
On Rye.				
1st prem. to J. I. Curtis, Westmorel'd,	52	37	18	56
2d " T. Curtis, "	46	24	13	34
On Barley.				
1st prem. to H. B. Bartlett, Paris, ..	63	27	22	75
2d " E. Dayton, Vernon,....	63	9	21	80
On Peas.				
1st prem. to Amos Miller, Vernon, .	56	36	26	69
2d " E. Rivenburg, " .	48		29	20
On Buckwheat.				
Truman Curtis, Westmoreland,.....	24⅜		3	87
On Beans.	half acre.			
L. T. Marshall, Vernon,...........	10¼		5	98
On Potatoes, (quantity and quality.)	half acre.			
1st prem. to W. C. Burritt, Paris, ...	328	54	100	20
2d " H. B. Bartlett, " ...	326	11	57	13
On Potatoes, (quantity only.)	half acre.			
1st prem. to E. Dayton, Vernon. ...	370	50	64	60
2d " H. B. Bartlett, Paris, ..	333	24	69	62
On Ruta-Bagas.	fourth acre			
Pliment Mattoon, Vienna, ...	247		54	26
On Carrots.	fourth acre			
1st prem. to Philo Griswold, Vernon,	415	13	49	19
2d " L. Warner, "	386		58	22
On Mangel-Wurzel.	fourth acre			
L. Warner, Vernon,...............	236	32	24	15

Extra premiums were awarded on carrots, to Wm. Wright, Vernon, for 1198 bushels per acre, and to Samuel Denison, Floyd, for 800 bushels per acre. The estimates of value in each case, includes straw, stalks, &c., as well as grain. It will be seen that the crops are estimated at higher prices by some of the applicants than by others, but most of them seem to be fair estimates.

When I commenced the preparation of this article, I only intended to mention a few of the principal crops, but could find no stopping place, and so have ventured to ask you, Mr. Editor, to insert the whole. I think you will grant me this favor, partly because I have not troubled you much with my long communications lately, but more especially on account of the important position of the Oneida county society. That society represents nearly ninety thousand persons, a great proportion of whom are directly engaged in agriculture, and from its central position, may have a good influence upon other societies. From a long acquaintaince with most of its members I have entire confidence in its success.

E. COMSTOCK.

Albany Ag. Warehouse, Jan. 11th, 1846.



PLAN OF A FLOWER GARDEN.—Fig. 14.

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Cultivators with limited means, who lay out and keep their own gardens, are often at a loss for a plan. The accompanying design is a simple one, and is not hard to apply in practice, and has been found easy to keep well cultivated, as it admits of horse culture for all the rest of the garden.

The entrance to the garden is at B; on the opposite side is the summer-house or arbor, A; between these are the curved flower beds. At *c*, *c*, are small ornamental shrubs, as the double flowering almond, the Japan quince, the Tartarian honeysuckle, &c., and further off, at *d*, *d*, are rows of gooseberries, currants, or quinces; still further off are rows of fruit trees, at *e*, *e*. Between these rows are rows or drills of vegetables, strawberries, asparagus, &c., which may be kept clean by horse culture.

This flower garden may be laid out by first drawing a line from A. to B., through the intended center, and two others at equal distances on each side, and by occasienal measuring at equal distances from the center line, the regularity of the beds are preserved. The elliptical bed, *f*, is marked the usual way, by means of a cord tied together at the ends, and running round two pegs near its intended extremities, the scratching point being pressed against the cord, while sliding round and marking the circumference. A regular curve may be given to the beds by setting in pegs at equal distances, each successive one varying a certain distance from the right line.

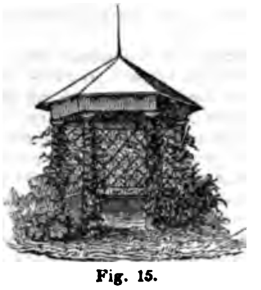

Fig. 15.

The beds, if planted with herbaceous perrenials, may be quickly cleared of weeds and mellowed, by the use of the hoe and rake, without hand weeding.

The summer-house, (fig. 15,) was made according to the design represented in the annexed cut, of rough surfaces handsomely whitewashed, ten feet in diameter, and the whole, including materials, cost less than the writer once gave for a pair of boots, which he soon wore out,—but the house stands—and is admired by every one who sees it

SHEEP AND WOOL.

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ILLUSTRATED BY A GROUP OF MERINOS.

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THE plate herewith given, represents a group of prize Merino sheep, belonging to SOLOMON W. JEWETT, of Weybridge, Vermont. The figure in the foreground is that of the noted buck *Fortune*, which received the first prize and gold medal of the American Institute at the exhibition in New-York city in October last. The other figures are those of ewes (with their lambs) which were among a lot of five that took the first premium at the exhibition of the Addison county Ag. Society, at Vergennes last season, where there were *more than one thousand* fine wooled ewes shown.

The buildings in the back-ground represent Mr. Jewett's residence, with some of his barns, &c.

When in Vermont last season, we had the pleasure of examining Mr. Jewett's flock, including the fine animals whose portraits are here given. He has upwards of seven hundred sheep, mostly descendants of the imported Merinos of Messrs. Humphrey, Jarvis, De Wolf, Cuff, and Cock, with some purchased of Wm. Davies, Esq., of Poughkeepsie. *Fortune* was the produce of an ewe of the Cock stock, by *Consul*, bred by Hon. Wm. Jarvis. [See Cultivator for 1844, p. 378, '79.] He is a large-bodied, short-legged sheep, carrying an enormous fleece, which, though not the finest, is of *good* quality. He is seven years old—was not sheared last season, but the six fleeces which have been taken from him averaged *eleven and a half pounds*, well washed. He has been used for two hundred ewes annually; and his progeny, which are widely scattered over the country, have received numerous prizes, both of state and county agricultural societies, and are much esteemed for their hardy constitutions and heavy fleeces.

The ewes are very handsome animals, bearing a large quantity of long, soft, strong wool. Mr. Jewett certainly deserves credit for the spirit he has shown in purchasing at liberal prices many of the best Merinos in the country; having in this manner formed a breeding-flock from which much valuable stock has been disseminated.

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GENERAL ADVANTAGES OF SHEEP HUSBANDRY.

Although sheep-husbandry in this country has been lately much extended, it is probable that it has not yet reached the limit within which it may be profitably pursued. There is an immense demand created for wool by the wants of our own population, which now numbers twenty millions, and is increasing at the rate of more than a million and a half annually. We regret however, to say that our farmers have not heretofore been allowed, to the extent they should have been, the supply of this demand. Wool has been brought into our markets from South America which has competed injuriously to the interests of our farmers, with that produced here. Of this fact there can be no doubt, but we do not intend in this article to tell how or why it has been done. It is sufficient for the present, to say, that we hope effectual measures will shortly be taken to remedy the evil, which has given just cause of complaint.

It is an important and fortunate circumstance that the different fabrics for which wool is used, require wool of different qualities. Fine broad-cloths, strong kerseys, and the various kinds of worsted goods, are made from materials produced by sheep of different characteristics. Hence the general market for wool is extended vastly beyond what it would be if only one kind was used. It is fortunate also, that the different kinds of sheep are adapted to different locations and soils. Those producing the finest wool, as the Saxons and the finer class of Merinos, require a moderate climate, dry soil, sweet and nutritious herbage, with shelter from severe weather. For cold, exposed and uncultivated situations, stronger constitutioned and more vigorous breeds are required, such as the Black-faced and Cheviot sheep of Scotland, whose wool, though not calculated for the finer sorts of fabrics, is converted to many useful purposes. For a more mild climate, and the succulent herbage of rich meadows and highly cultivated grounds, the different heavy English long-wooled sheep, as the Leicester, Cotswold, Lincolnshire, and Romney-Marsh breeds, are adapted.

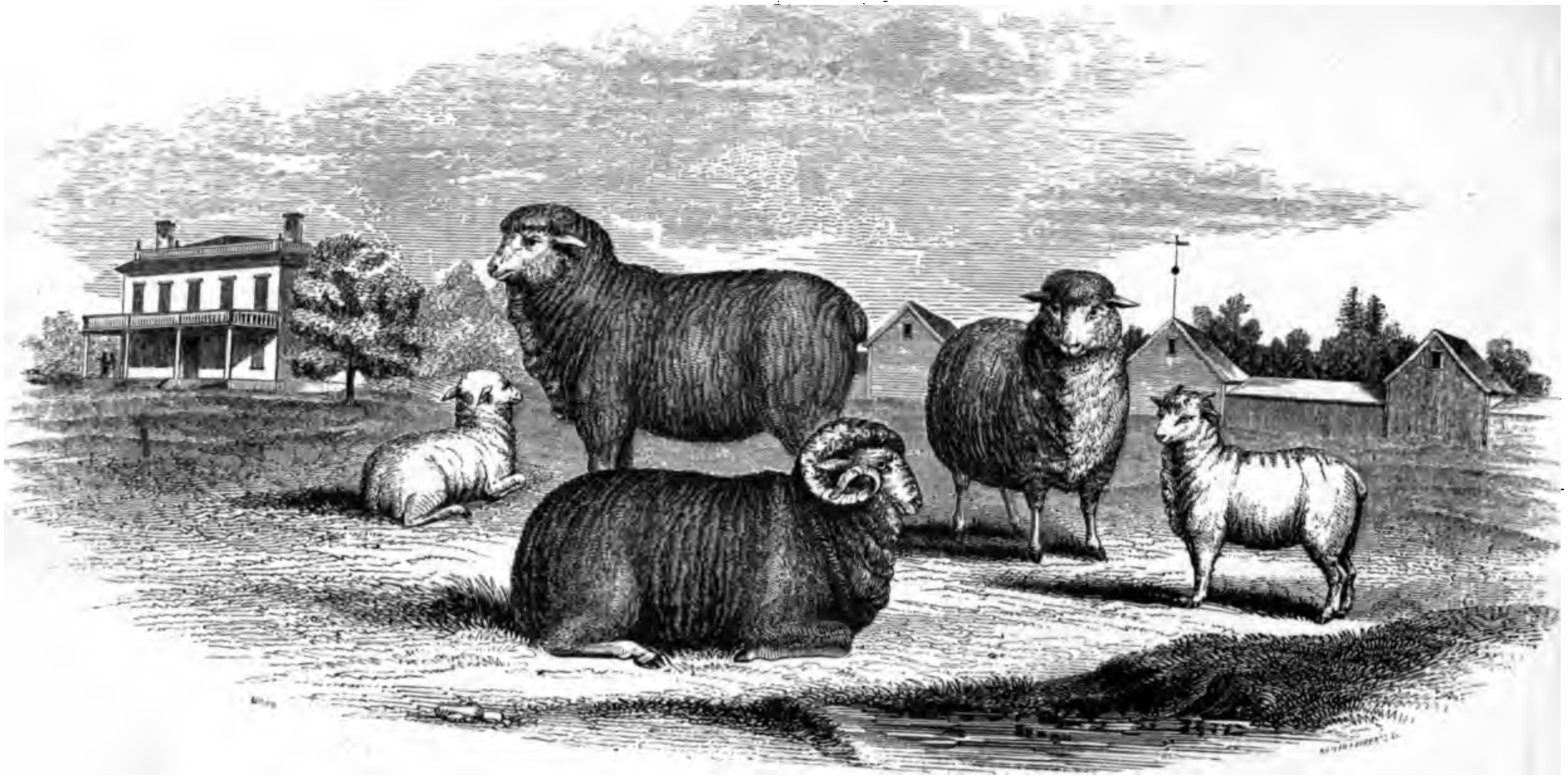
The increasing demand for various descriptions of wool which has been created in this country by the establishment of manufactories for almost every description of woolen goods, together with the increasing demand for fine mutton in our large markets, has opened the way for an extensive dissemination of various breeds of sheep, and if they are judiciously adapted to soils and locations, good profits may undoubtedly be derived from all.

A great quantity of wool is anually consumed in the manufacture of various descriptions of carpets and rugs. Much of this wool might be produced to good advantage in this country, though it is now principally imported. We visited an establishment in Connecticut last summer, the Thompsonville Carpet Factory, where upwards of eight hundred thousand pounds of wool is used yearly in this kind of manufactures. From one of the managers, Mr. THOMPSON, we obtained some interesting items in regard to the business. Most of the wool comes from Smyrna, and costs in the dirt, eleven to twelve cents per pound. It goes through a process of cleansing, at the factory, and when cleansed costs twenty-two to twenty-three cents per pound. Could long-wool of good quality, say Leicester and Cotswold, be obtained in this country, it would be preferred at an advance over that imported, of from three to six cents per pound—or twenty-five to twenty-eight cents per pound. It would even be desirable to procure the whole amount wanted, in this country, if it could be had, to the total exclusion of the foreign wool.

The description of wool for which there is and will be the greatest demand in this country, is that which constitutes the cloth ordinarily worn by the principal part of our population, and as the mass of our citizens do not wear the finest nor the poorest cloth, the demand will chiefly be for wool which will make that of medium quality. The most hardy and heaviest-fleeced sort of Merinos are well adapted to producing wool of this description; and they are also better suited than most varieties to scanty or coarse fare and unsheltered situations. There is some liability, however, that the market for this kind of wool may be over supplied—a liability which the adaptedness of this kind of sheep to common and poor treatment, rather increases, by encouraging their multiplication. A large portion of wool-growers, particularly in the western part of the country, do not provide themselves with suitable pasturage, shelter, aud winter food, for keeping the finest-wooled sheep, and are of course under the necessity of adopting such as will stand their management. Hence it is obvious that for the present at least, there will be produced a full proportion of the medium sorts of wool.

It is the opinion of many that the *finest* description of wool may be profitably produced in this country not only for our own wants, but for exportation also. In this kind of wool it is thought we need not fear competition, as we are supposed capable of producing it as cheaply as it can be done in other countries. A degree of care is requisite to produce this article, which precludes the possibility of its being grown where sheep are left unprotected in a wild, uncultivated country. The finest-wooled sheep cannot live long in such a situation; neither can wool which will command the highest price be had where the sheep are forced to range for subsistence among bushes and forests, or over plains covered with pernicious weeds whose burrs and seeds fill and tangle the fleece till it is felted on the animal. On the other hand, such wool can be produced only where due care is bestowed, both in reference to the food and shelter of the sheep, and the protection and preparation of the fleece.

The best locations for *mutton* sheep, are those convenient to large markets; and the prices which good mutton and lamb bring at certain seasons of the year,



MERINO PRIZE SHEEP.

The Property of S. Jewett, Esq. Weybridge, Vermont.

See "Th

render them profitable articles to the farmer. The best sheep for these purposes are the South Down, Leicester, and Cotswold. The former give the most delicate mutton, but the latter have the advantage of greater weight of fleece, which, latterly, is of about the same value per pound in market.

One of the most important considerations in reference to sheep-husbandry is the amelioration of the soil. In this respect sheep have an advantage over all other stock, as none improve the land so much. The herbage of sheep-pastures frequently improves for many years with no other manure than that dropped by the sheep—the wild plants dying out, and the cultivated ones, particularly white clover, and several varieties of *poa* or bent grasses coming in. The increased yield of grain crops, particularly wheat, on broken-up sheep pastures, is another evidence of the improvement of the soil. Hence a profitable alternation is grass, depastured by sheep, and grain. The land remaining in pasture three or four years, or as long as circumstances may render expedient, and is then for a year or two put to such kind of grain as may be most profitable. Under this course the crops seldom fail to improve in quantity. Very heavy crops of wheat are often produced on sheep pastures—thus proving the adaptedness of wheat and sheep-husbandry to each other.

Wet lands are thought to be less benefited by sheep than others; but as sheep are known to be unhealthy on such lands, they should not be kept on them.

Some have entertained the strange idea that sheep are injurious to the land—that they "*poison out*," as the phrase is, the cultivated plants. It is true that ground may be so over-stocked with sheep that to procure a subsistence they are obliged to gnaw the grass to the very roots. In such cases clover and some other plants may be bitten so closely that they are injured. But in ordinary cases we are perfectly satisfied that the grazing of sheep is beneficial to the land and not injurious to the herbage of pastures. Indeed we are confident that most mowing grounds or meadows would be benefitted by being moderately fed every autumn, by sheep. We have seen and experienced abundant proof of this, and can bring the testimony of many of our best farmers to establish the point.

Sandy lands are particularly benefitted by sheep—their tread impressing the soil to just the degree that is desirable. Cattle are often too heavy for the land, but sheep never do injury from this cause. Instances could be cited of soils which were naturally so light that they were blown about by the wind, having become, by a rotation of root crops with clover, pastured by sheep, very productive in various kinds of grain and grass. After the land has been in clover, and the sheep have pastured on it for two seasons, it becomes much more tenacious, and instead of being moved about by the wind, it may be turned over ins mooth and sufficiently compact furrows. We would name the farm of Mr. J. McD. McIntyre, on the pine plains, near this city, as a good example of this kind of management with a sandy soil.

It is probable that the principal cause of the improvement of lands by sheep, is the manner in which their manure and urine is distributed—being dropped in small quantities, and usually quite evenly scattered over the ground. The manure, from being finely divided, falls at once around the roots of the grass, and the first rain drives its salts and valuable properties immediately into the earth, where they are made available to the growth of plants. The urine, the most stimulating of all manures, is not, as in the case of horses and neat cattle, dropped in so large quantities as to kill the herbage where it falls, but promotes directly the growth of rass.

BARLEY AND FLAX GROWN TOGETHER

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An experiment has been tried the past summer by some gentlemen of this town in raising barley and flax together, and has been attended with success, as appears by the following statements of Col. Stibbins. He prepared an acre of ground for barley, after sowing two bushels on the ground, he then sowed one bushel of flax-seed on the same acre. In the fall he threshed the barley and flax out together with a machine, (it was cut and secured together,) and on cleaning it up he had 30 bushels of barley and 15 bushels of flax-seed. The sale of the crop stands thus:—

Thirty bushels of barley, at 50 cts. per bush.,	$15.00
Fifteen " flax-seed, at $1.00 "	15.00
	$30.00

Col. S. Says, the flax-seed was a clear nett profit, as he thinks the ground produced as much barley as if no flax had been sown, for he had sowed barley on a few acres adjoining this acre which produced only 30 bushels to the acre, and the land equally as good.

Earlville, N. Y., 1846. G. W. B.

CULTURE OF WHEAT.

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RUST—SUITABLE MANURES.

L. Tucker, Esq.—In the January number of the Cultivator, (present vol.) there is a communication by "A Farmer of Tompkins County," upon *rust on wheat*, upon which I offer a few remarks. In 1838, Mr. Colman, (then Ag. Commissioner of Mass., by order of the Senate, prepared a report on the cultivation of spring wheat. Mr. C., in speaking of the "situation and aspect," says:—"The aspect of lands, whether high and airy, or low and confined, is of considerable moment. Various theories have been suggested in regard to the origin of rust and mildew in wheat. The prevalent opinion of the French naturalists of the present day, is, that they, like smut, consist of small parasitical plants designed to be nourished upon the wheat plant. Whatever may be the fact, the appearance of these diseases bears as near a relation to certain states of the weather at the time the wheat is maturing its seed, as the courses of the tides to the changes of the moon. These diseases usually occur in the damp, hot, steamy, foggy weather of July. In low and confined situations, wheat is much oftener blighted than in situations which are elevated, and where the air circulates freely."

Mr. C. forwarded me a copy of his report when published, and I was particularly interested in the above extract. Sometime in the following July, we had for two or three days frequent light showers with bright sunshine between them, and the weather was what we call close and muggy. Soon as the sun appeared between the showers a light fog would be seen arising from the plowed fields. I then seveal times observed to the persons in my employ, that this would test Mr. C.'s theory of rust or mildew upon wheat. There was within sight three fields of wheat, and on different, farms; two of them were sown about the 20th of May, the other just one week later—(sown thus late to escape the ravages of the weevil,) soil similar—previous crop, corn—elevation of the several fields above the river about the same. Within four days after this "spell of weather," the two first sown fields were brown with rust, and at harvest the straw was brittle, and rusted from top to bottom, the grain light and shrivelled, and not more than half a crop. The third field, sown a week later, was uninjured, and at harvest the straw was bright, and the berry plump and full.

Had this showery weather happened a week or ten days later, my belief is, that the first two pieces would have escaped, and the other would have suffered, for I have witnessed similar results since that time.

It seems to be the critical time when the wheat is in the milk, and such weather occurs.

Your correspondent says, "My (his) belief is that the rust plant or fungus, whatever it may be, always exists on the stalks of the wheat, but its growth is not such as to injure the plant unless warm weather and moisture unite at a particular period during the growth of the plant, and prior to that period it is not visble to the naked eye.

Others entertain a different opinion from the above

In the Canadian Ag. Journal for July, 1845, there is an article on mildew in wheat, in which it is said, "Mildew in wheat has been shown by naturalists to be a minute fungus, *whose germs are floating in the atmosphere*, and only require for their development, a particular condition *the surface* of whatever plant they attack. Thus, their growth is, doubtless, favored—perhaps insured—by the exudation of sap from the ruptured vessels of the wheat plant, on which they may alight. This rupture may be caused by a plethoric state of those vessels— erhaps, also, by a deficiency of *silex* in the epidermis of the straw; and this condition is brought on by whatever occasions a great flow of sap, or causes it to continue too long; and the indications of it are a deep green color in the leaves and straw, and the continuance of this dark green color a few inches below the ear after the chaff has begun to turn off. When this symptom appears, a bad case of mildew is inevitable."

It is an important question to farmers whether they have it in their power in any degree to guard against the great losses that frequently occur by the mildew or rust upon their wheat crops.

Your correspondent from Tompkins county, "believes he has discovered a remedy for the rust, plant or no plant. He is preparing to make the experiment next season, and if successful the result will be communicated." I cannot but hope his experiment will be successful—and that he will report the experiment whether it proves so or not. And in the meantime I will offer a few suggestions and facts that may possibly have some bearing upon the subject.

By a chemical analysis of a plant we ascertain what the inorganic, or mineral parts are composed of. The principal part of the ash of wheat straw consists of silica; a ton of wheat straw will yield about 50 lbs. of it. Silica is the substance that gives the hard coating upon the surface, and strength to the straw of grain and the grasses. It is rendered soluble in the soil by the alkali, potash and soda. But there are many other substances, both mineral and organic, required for the perfect crop of wheat. All these substances should be in sufficient quantity, and none in very great excess. On very highly manured soils there is an excess of nitrogenous matter, which is favorable to a luxuriant growth of straw, but it is deficient in strength and it lodges; and in the warm showery weather spoken of the flow of sap is excessive, and from the deficiency of coating upon the surface of the straw, the vessels are ruptured, the sap exudes and presents a favorable place of deposit for the vegetation of the seeds (spores) of fungi, (rust,) which, at certain seasons, are always floating in the atmosphere; the ascent of the sap to the ear is cut off by the ruptured state of the sap vessels; a light and shrivelled seed is the result. Instances of this kind are frequently seen in fields of wheat growing on the sites of dung-heaps, when the other parts of the field are free from it.

From some facts—or cases, that bear strong evidence of being facts, I think that a large amount of soluble silica in the soil, is the surest preventive against a weak straw, and consequent rust or mildew.

Payson Williams, Esq., of Fitchburg, Mass., has on very highly cultivated land, raised over 55 bushels of wheat per acre. Mr. Coleman, in his report says, "Mr. V.'s great crops of wheat were assisted by 50 bushels of wood ashes spread to the acre, and a good crop of wheat seldom fails to be obtained on newly cleared and burnt land. The potash is here in large quantities."

One of the important offices of potash in the soil is to supply in a soluble state to the roots of grain plants, the silica which is so essential to the strength of their stems. Says Prof. Johnston—"This silica exists very frequently in the soil in a state in which it is *insoluble* in pure water, and yet is more or less readily taken up by water containing carbonate of potash, or soda, and as there is every reason to believe that nearly all the silica they contain is actually conveyed into circulation of plants by the agency of potash and soda. It is not unlikely that a portion of the beneficial action of these substances especially on the [illegible] and [illegible] grain crops may be due to the quantity of silica they are the means of conveying into the interior of the growing plants. Silica enters the plant chiefly in the form of silicate of potash or soda."

It is said that grain never lodges or rusts upon the sites of coal hearths, or in the soil that has covered the coal-pit while burning. If that is a fact it is not unreasonable to suppose there is an abundant supply of soluble silica in such soils.

Mr. Pell has succeeded in raising very large crops of wheat on highly manured soils, by applying a large quantity of ground charcoal to the soil at the time of sowing the wheat. Perhaps too, that may have had the effect of giving strength to the straw.

In the Farmer's Monthly Visitor, for Nov., 1845, there is an account copied from the Genesee Farmer, detailing some experiments by Mr Haywood, of the city of Buffalo, upon the application of charcoal to the wheat crop. When there was applied 50 bushels of ground charcoal, the yield was 25 to 35 bushels of wheat per acre; same kind of soil without the charcoal produced from three to five bushels, only, per acre, and badly rusted. The experiments were upon a large scale, extending to over 90 acres. It is also stated in the same article that where twenty bushels of *unleached* ashes had been scattered over an acre at the time of seeding, it has evidently increased the crop some ten or twelve bushels per acre.

Some writers of note in the agricultural *world*, doubt the utility of the use of lime in agriculture, but notwithstanding, *some farmers*, in the middle and southern states, as well as in many parts of Europe, persevere in the use of it. By the use of lime and clover much of the exhausted land in the southern states have been reclaimed, and now produce good crops of wheat. When a crop of clover is turned under upon land that has had a dressing of lime, one of the consequences would be to produce an increased amount of soluble silica in the soil. The decomposition of the clover would produce carbonic acid, that in turn would when aided by the moisture in the soil decompose the carbonate of lime, and its alkali would act upon the insoluble silica in the soil and render it available to the succeeding crop of wheat; and Prof. Johnston states, that it is said wheat is never laid (lodged) that follows a clover lay. If that is a fact, we must suppose it has a stiff straw, and that that stiffness is due to the soluble silex in the soil.

I presume, Mr. Editor, you have the London Gardiner's Chronicle. If so, if you will turn to that of Aug. 9th, 1845, you will find a very interesting article by Prof. Johnston on the use of silicate of soda as a manure for the wheat crop—or rather its application to the soil for the purpose of giving more strength to the straw of wheat. Some English agricultural writers have advanced the idea of the necessity of the application of the silicate of soda in connection with guano, or dissolved bones, for the purpose of giving to the crop soluble silica.

Prof. J. analyzed four different soils in his laboratory for the purpose of ascertaining the amount of soluble silica in them. The quantity he found in the soil that contained the least, amounted to 6,700 lbs. upon the acre, taking the soil twelve inches deep. Allowing 3,000 lbs. of straw to the acre, the amount of silica carried off by a crop of straw, amounts to 75 lbs. per acre; ergo, the soluble silica alone in the soil, will supply silica to the crops for 900 years in succession. And the soil that contained the most—four times as much—would supply it for 3,600 crops. From the above analysis he comes to the conclusion that it is not necessary to apply a soluble silicate to the soil. I do not doubt the accuracy of his analysis, but he is a strong advocate for the application of ashes and lime to the soil, and one of the effects of their application is to increase the quantity of soluble silex.

As observed by Mr. Colman, a good crop of wheat seldom fails to be obtained on newly cleared and burnt land. Where the forest growth has been burned, and all the ashes left upon the ground, the amount of soluble silica must, I think, be many times greater in the burnt soil, than in the soils he analyzed.

Dr. Dana, in his Muck Manual, tells us, the soil of an acre of land six inches deep, will afford 6,726 pounds o lime, and 73,311 pounds of potash—lime enough for an annual crop of rye for 7,400 years, and potash enough for the straw of annual crops of wheat for 3,000 years. Now this may be all correct; but farmers *think* they find it for their interest in applying both ashes and lime to their soils. In the year 1844, I prepared a large quantity of soluble silica in a compost heap, for the purpose of testing its use. When I commenced writing this article I intended to have given the process and result; but the unconscionable length of this, must be my apology for resting the question here for the present. Yours, &c., L. B.

Warner, N. H., Jan. 8, 1846.

CULTURE OF POTATOES.

L. Tucker, Esq.—In the last number of the Cultivator, you expressed a wish that I should give a particular account of the process of culture by which I have succeeded in raising the unusually large crops of potatoes which I mentioned to you in a former communication. There is nothing in my plan either difficult or original, and I am only surprised that greater crops are not generally raised; knowing as I do from experience, that to produce 800 bushels per acre, is, in this vicinity, an easy and simple process; provided the season is moderately favorable. For potatoes I prefer a soil composed of sand and clay in about equal proportions, resting upon a clay subsoil. On such a piece of land which has been in grass a few years, I haul out in February or March six four horse wagon loads of good stable manure to the acre, (about 80 bushels to the load.) The manure is immediately spread and turned under by inverting the sod to the depth of ten inches at least. About the last of April spread on the inverted sod, about three additional wagon loads of manure to the acre. Harrow the ground well lengthwise with the furrow. Cross plow to the depth of four or five inches, and harrow again. By this time the last manure applied is well mixed with the soil, and the land is in a fine state of tilth. The first of May, mark out the ground in rows three feet apart each way, with a large two horse plow, to run as deep as the first plowing. A good plan is also to let the bull-tongue plow follow in the furrows after the bar-share plow. This breaks up and loosens the subsoil under the rows. A subsoil plow would I suppose do the work better, but we have none, and the bull-tongue answers very well, as it loosens the subsoil and does not throw it up. We plant the "*long reds*," using large potatoes for seed, cut into pieces with about four eyes each, and put four pieces in a hill; which takes about twenty bushels of seed to the acre. The seed is thus planted deep, on a loose mellow bed, and the ground after the planting is completed has a perfectly level appearance. The after culture is quite easy and simple. As soon as the plants are two inches above the ground, plow with the bull-tongue as near to the hills as possible; if most of the plants are covered up, so much the better. In two or three weeks plow again both ways; by this cross plowing the earth is well loosened and thrown up around the hills, in a sort of hollow square, a little depressed in the centre, presenting a broad surface to receive the rains, and convey the moisture to the roots of the plants. The hoe is used to destroy such weeds as have escaped the plow, and to give the hills the proper form. Care is taken not to make those conical shaped hills, which used to be the fashion, so admirably calculated to carry off all moisture from the roots of the plants. I have found the *long red* to be the most productive of any kind of potatoes I have ever cultivated. I tried the Rohans two years, but found them to yield at least 30 per cent less than the long reds. I have never tried planting in drills, and prefer hills on account of cross plowing which I consider very important. I know that 800 bushels per acre can be raised by my plan, for I have done it three years in succession in 1842, '3 and '4. In the year 1844, the rot made its appearance in my potatoes, and I supposed that about 200 bushels were destroyed. Last spring, in addition to the other manure, I applied about 40 bushels of wood ashes and 4 bushels of refuse salt per acre to my potatoe ground. The ashes were spread with the last application of manure, and the salt sown broad cast after planting the seed. I think that the ashes and salt had some tendency to prevent the disease, as it was less destructive to my crop than it had been 1844, while the crops of many of my neighbors suffered much more than in any previous year.

Respectfully, yours, &c. Wm. McCoy.

Franklin, Pendleton co. Va., January 10, 1846.

THE POTATOE DISEASE.

L. Tucker, Esq.—Facts being the very foundation of science, it has struck me that the following might assist some inquirer into the causes of the potatoe disease.

In 1843, the disease among the potatoes showed itself in this country. That year, in many parts of the country, the potatoes rotted in their bins, and it was found necessary to remove them. In 1844 the disease was more prevalent, while in 1845 it was much less extensive. In my own case, very little of the disease appeared among the potatoes raised, in either year. Still, there was a little of it, among the pink eyes, in particular. Having observed that potatoe-balls were very scarce in my own fields, and indeed in all this region, and being confident that the potatoes now raised in this country are much inferior to those raised five and thirty years since, I sent to England for seed. A friend was kind enough to obtain for me twenty-four hampers of fine Lancashire potatoes, last spring, which reached me just in time for planting. I had them placed in new ground, on the side of a field in which were planted pink eyes, trout and orange potatoes. The yield of all the potatoes was light, on account of the drouth, but the Lancashire did as well as could be expected. Four and twenty bushels of English potatoes were put away, for seed, in a cellar, under a hay mow, where the temperature is hardly above freezing; as good a place for the preservation of vegetables as could be selected. A quantity of the trout and orange potatoes were put in another corner of the same cellar. Fearful that the weather was getting too severe for my seed potatoes, as the mow grew thinner, I ordered them to be removed, last week, to another cellar. On opening the straw that covered the heap, more than half of the potatoes were found to be far gone, with the disease. As the rot has appeared in none of the other sorts that were grown in the same field, including pink eyes, I am left to infer that the English potatoes were infected, while the others were not.

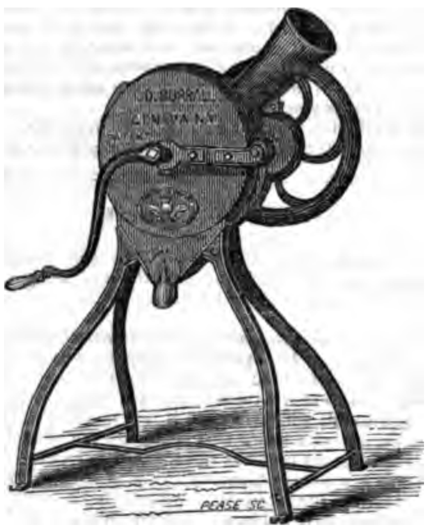
I merely state the fact. The disease existing so extensively last year in England, may possibly have some connection with this loss; though to connect the circumstances it is necessary to believe that two seasons are required to develop the rot.

I will only add, that I had brought into my house some of the varieties that were grown, the English excepted, and I cannot find that a single potatoe has been affected. I know of no difference in the culture or land, that should have produced this result. No manure was carted on any part of the field, though plaster was used throughout. As piles of logs and stumps had recently been burned on the land, it is possible these ashes may have reached to these English potatoes, though not more so than to the others, as the log heaps extended over all parts of the field. I do not think, moreover, that the vines ever looked thrifty.

Yours, &c. J. Fennimore Cooper.

P. S.—It may be well to say that the English potatoes, diseased as they are, have been fed to store hogs, with perfect impunity. What is left of them seems to be as nourishing as the sound potatoe. They are affected with the black, cholera-looking disease, and appear to moulder away, rather than turn into a semi-liquid putrid substance, as was the case with some grown in my garden, in 1844.

Hall, Cooperstown, Jan. 6, 1846.



BURRALLS CORN-SHELLER AND SEPARATOR.—(Fig. 16.)

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We saw this machine in operation for a few minutes, the other day, and formed a favorable opinion of it; but as we have not had a sufficient opportunity of examining it, we offer the following communication descriptive of its operation:—

When will wonders cease*!* Do not stare, gentle readers, for it is even so. Mr. T. D. Burrall, of Geneva, has made an improvement in the simple implement of a corn-sheller, which "takes the rag off" of all its predecessors. It cannot be beat. Why, just look at the above cut. See how simple it is—all iron—strong and substantial, and what is more, it cannot be easily be put out of order. Durable too—last a man's life time. Why, there is nothing of it—a mere pocket edition. Still its operation is wonderful; it strips the kernel clean from the cob, without breaking either the corn or the cob, and what is more, it not only separates the corn from the cob, but the cob from the corn, and deposites the corn at the bottom in a half-bushel, fit for market or the mill, and the cob through a "knot hole" or orifice on he back side, near the top, thereby saving the trouble of "cleaning up," as with other machines. Take it in your kitchen and it is fine fun for the boys to shell from twenty to thirty bushels of corn in an evening. The "gude" wife will have no reason to complain of dirt or a "muss" on the floor.

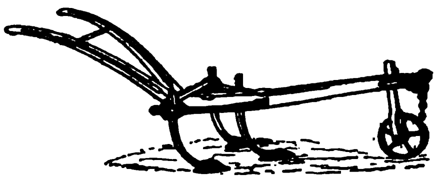
To be serious, Mr. Burrall has really presented us with a most efficient and *useful* machine, leaving the shovel, frying-pan handle, and all other machines far in the back ground. The principle of the sheller is not new, but the improvement consists in the case or shell which encloses the operating parts, and the complete separation of the corn from the cob. It requires but little power, and is capable of shelling from 10 to 2 bushels per hour.

Arrangements have been made for their extensive manufacture in this city, and a few are now on sale at the Agricultural Warehouse of Messrs. E. Comstock & Co., No. 23 Dean-st. Retail price, $10.

C. N. Bement.

Bement's Am. Hotel, Albany, Jan., 1846.

Cure for Bee-stings, &c.—Liquid ammonia is found to neutralize the poison of bee-stings, and the bites of poisonous insects, and to afford more immediate and effectual relief than any other remedy.



HORSE-HOE.—(Fig. 17.)

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The above is a cut of a good horse-hoe or cultivator for working among corn, potatoes, and turneps in their early stages, and we should suppose would be excellent for tobacco and cotton. The legs are wrought iron, and the feet are laid with steel. Cultivators made of cast iron answer very well for very light soils, but are poorly adapted to those which require loosening and pulverizing. A tool like that above delineated, if well constructed may be made to penetrate the soil as deeply as is required by any crop, and it will at the same time so cut up the weeds as to effectually destroy them.

CONNECTICUT IRON WORKS

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The valley of the Housatonic abounds in iron ore, which gives employment to many furnaces for smelting it, and for various other establishments for the manufacture of different descriptions of iron articles. It was at Salisbury in Connecticut, we believe, that the first iron was made in this country. The first American cannon were also madehere in the time of the Revolution; and ever since that time the town has been noted for its iron manufacture. The iron here produced is of a quality superior, for many purposes, to that made in any other part of the country.

At this time there are in Salisbury four blast furnaces and four forges. A brief description of one of these, which the writer had an opportunity of visiting not long since, may furnish some idea of the immense value of the iron business in this vicinity.

The iron works of Oliver Ames & Co., are situated in Falls Village, in Salisbury. They were erected and are carried on under the supervision of Mr. H. Ames, a son of the senior partner. These works cost $80,000, and are devoted mostly to making heavy articles of wrought or hammered iron. The original material used is pig iron, of which twelve hundred tons are used annually,—producing eight hundred tons after it is manufactured, and receiving from the process an increased value of eight cents per pound from the pig. The business is chiefly making tire for locomotive wheels, heavy shafts for steam-boats, and filling government contracts for various articles, such as chain cables, irons for field carriages, &c. Fifty men are constantly employed, and from three hundred to five hundred dollars worth of work are turned off daily.

The tires of the locomotive wheels, weigh from four hundred to eight hundred pounds each, and a ton of iron is used daily for this purpose. Steam-boat shafts are frequently made weighing seven thousand pounds each.

Ore is worth two and a half dollars per ton at the bed, and three to three and a half dollars delivered at the furnaces. Pig iron is worth forty to fifty dollars per ton. Messrs. Ames use annually two thousand cords of wood, worth two dollars per cord, forty thousand bushels charcoal, worth six cents per bushel, and seven hundred tons bituminous and anathracite coal, worth ten dollars per ton. Their men are paid from one dollar to three dollars per day.

At Furnace village, which is also in Salisbury, we called at Mr. Alex. H. Holley's cutlery manufactory, but not finding Mr. H. at home, we were unable to learn many porticulars concerning the establishment. It was the ancestors of Mr. Holley who made at this place the cannon before alluded to, in the Revolution.

SAVING MANURE.

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We witnessed on the farm of Mr. Jonas Steiger, Enfield Ct., a few months since, a good plan of managing manure. Large cisterns or vats were constructed under the stables where the cattle and horses were kept, into which the urine was conducted. The manure, intermixed with straw, litter, turf, &c., was piled up in square heaps over the cisterns, and the urine pumped up, and by means of spouts turned equally over the manure. All the liquid which soaked from the heaps, was again conducted into the cisterns. The liquid was turned on the manure in just such quantity as to keep up the degree of moisture necessary to gradual decomposition—violent heat being never allowed, as it would dissipate some of the valuable parts of the manure. If there is too little moisture, the heat rises too high, and more liquid is pumped on to check it.

It strikes us that this is a good mode of making compost. It may not, perhaps, be so readily carried on in cold freezing weather, but during such weather, it should be remembered, the manure is not subject to waste by fermentation, and it may be piled for composting in the spring. The cisterns, however, should be of sufficient capacity to hold all the urine which may be made during the cold weather.

Mr. Steiger is from Switzerland, and had only been on the farm, at the time we called on him, about six months. His residence in Switzerland was not far from Hofwyl, and he was formerly acquainted with Fellenberg and with the management of his celebrated agricultural school. It is not unlikely that the mode of managing manures above mentioned, may have been derived from Fellenburg's Institution, as according to a letter of our correspondent, Mr. Horsford, (which will be given in our next.) it agrees with the practice there followed.

We were gratified to observe that Mr. S. had commenced on his farm several valuable improvements; though from the short time the place had been in his possession, and the exhausted and worn down condition it was in at the time he purchased it, it could not be expected that everything would at once be set right.

It is not improper to remark that Mr. S. holds the patent, for the United States, of a machine invented about two years since in France, for knitting cloths and various garments. It appears to be an article of great value. He has now twenty-four machines, worked by water-power in operation, and has others in progress. A machine will make from thirty to sixty yards per day. The materials used are cotton, worsted, common woolen yarn, and silk, of all various degrees of fineness and quality. Some of the articles produced are very beautiful, and they are said to be generally superior in cheapness and durability to woven goods.

TRANSACTIONS OF THE ESSEX (MASS.) AG. SOCIETY.

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We tender our thanks to John W. Proctor, Esq. for a pamphlet of 125 pages containing the doings of the society for the last year. This is one of the oldest and most useful agricultural societies in the country, and is said to have been the first in Massachusetts to publish in detail its Transactions. We are informed in a note to Mr. Stone's address, contained in the pamphlet before us, that the Hon. Timothy Pickering was the presiding officer of this society for ten successive years, and that J. W. Proctor, the present secretary, has held that office for twenty years.

Mr. Stone's address contains much that is interesting, but we have room for but a brief notice of it. It particularly encourages the introduction of the study of agriculture into our schools. "I wish," says Mr. S., "to see the subject of agriculture hold a place in our school-books as prominent, at least, as that of war. If the spirit of the latter is to be fostered where young ideas bud and often fruit, by the charms of poetry, it cannot be asking too much that the praises of peaceful agriculture be said in sober prose. The relation which the latter holds to the former, in some of our school-books, affords little hope for an improved public sentiment while they continue in popular use."

Mr. Stone observes that "there is frequent complaint among farmers that their sons early imbibe a distaste for agriculture—that as soon as they are of an age to be useful, they seek employment and leave them to manage the homestead under the disadvantage of hired assistance." Mr. S. thinks this evil would be in a great measure remedied, if the elements of agriculture were made a branch of study in our common schools. "Possibly," he continues, "some may consider this a useless appendage to the studies now pursued—they may think that a boy can learn enough of agriculture on the farm, without the study of books. But if I have rightly estimated the influence of books or the choice of pursuits, then this study, so far from being useless, will be found an important auxiliary to an interest from which other interests are annually abstracting much of the best talent."

INDIAN CORN.

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Mr. Tucker—Of all the crops which are raised in the middle states of the union, none are of so much importance to the farmer as the corn plant, not only for its valuable grain, but its leaves, husks, and stalks, for fodder and manure; no plant which he cultivates being so well adapted to hold the valuable parts of the fæces and urine of the barn-yard from the pithy structure of its interior.

Corn, for success, requires a loose and rich soil, by which a rapid growth is obtained, and is thus enabled to overcome the changes incident to spring and its two ordinary and most powerful enemies, the wire-worm and the grub. The ravages of the former, are as we all know, below the surface, appear to be proportioned to the hardiness and probable poverty of the soil, preying on the main root, effectually preventing all production of the grain, if not destroying the plant. The grub, on the contrary, cuts off the stem near the surface; its range of destruction more general as regards soil, but evidently feeding from preference upon the more feeble plants, and therefore by complying with the conditions requisite for a vigorous growth, its action is but feeble. So also when corn is planted upon a sod recently turned under, the grub finding still its accustomed food.

There is also another observation which I wish to have recorded, being important to prove, if true, or to set aside, if false. It is the belief that the tendency of the corn plant is to produce a greater yield of grain in northern climates, and less grain and more leaf and stalk in southern ones; no state in the union producing such prodigious crops, per acre, as New-York, for example. Should this be the fact, it will lead the farmers here, and further south, not to force the plant after it has escaped its early enemies, but to reserve its strength and that of the soil, to near the time of setting; merely giving a healthy growth by moderate, and not excessive cultivation, previous to that important state of its being.

For the first years of my farming the manure was spread in the spring, upon a sod, for corn, finishing in time to plow for planting. This plan was changed, hauling out and spreading it the preceding autumn, plowing as before. This latter method appeared to be preferable, giving not only a quicker growth to the young plants, but evidently a better stand. I also noticed that the effect of the manure from remaining upon the surface for so long a period comparatively, was to make the soil loose or mellow, and to render the wire-worm and grub no longer causes of uneasiness.

The good effect of covering the ground in the autumn for the corn crop, were fully confirmed on an adjoining farm, and the knowledge thus obtained, led to the plan which at present I pursue. My neighbor commenced by hauling out the manure which was left after preparing his wheat ground, which sufficed for only about one third of it. He then proceeded to cover the remainder with straw, but did not finish more than one-half of the part which was left, leaving, therefore, a third part uncovered. The whole was plowed in the spring in time for planting. It may be satisfactory to state that the field was perfectly level, and the soil of uniform quality throughout its extent, but thin.

From the time the corn appeared above the surface to its perfecting, a marked difference was manifest between the two parts which had been covered and the part left uncovered, having examined the corn at the beginning of the growth of the corn, and at its completion. The parts which had been covered with manure and straw, stood well, being unaffected by worms. The color was very good and produced a fair crop; nor could any difference be perceived between them, as the owner informed me, in the quantity or quality of the grain when husked, so far as the eye could determine.

On the part which had been left without manure or straw, the wire-worm was so destructive, as to require more than once replanting. The color indicated less vigor, and the yield in grain inferior in every respect.

No experiment could be more decisive or important as regards the corn-plant than the one related. It established two important facts. The great advantage of covering the ground in the fall of the year for corn; the other, that no difference could be perceived in the crop between the part covered with straw, and the part with manure; consequently that straw could be substituted for manure in its culture.

It has been an object of no small importance with me in farming, to attain to certainty, quantity with goodness of crops, with the least expense of labor, and to obtain from the farm all the food or manure required for the various crops to be grown. That the latter object was possible I did not doubt, but in no way could I accomplish it so long as manure was required for both corn and wheat. Had grazing been combined with tillage, there would have been a sufficiency for both these crops, but the farm being wholly arable, there was only enough for one of them.

From being engaged in another pursuit which occupied me some years, and other causes diverting my attention from farming, it is only within eighteen months that I have been able to make an application of straw. My experience therefore is too limited to satisfy those who require comparative statistics, but sufficiently so to induce me to believe that I shall attain my object.

The field which was planted with corn last year, was a timothy sod, of about three years old. It was covered with straw the preceding fall. The grass at the time of breaking it up, which was just before planting, looked better than it had at any preceding spring; better than I have known old sods when manured. The corn crop equalled my expectations of it.

The same autumn, I also covered four acres of mixed grasses for pasture, leaving about half an acre uncovered by the side of it, which had been in potatoes and highly manured. The grass next year upon the covered part was the best, and better withstood the various spells of dry weather which prevailed last year.

LARDNER VANUXEM.

Bristol, Pa., Jan. 6, 1846.

BUCKWHEAT WITHOUT GRIT.

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DID any person, who eats buckwheat cakes, ever have the good fortune to get any containing not a particle of grit? A method not generally known, was lately stated to us by a practical farmer, who says that buckwheat raised in this way is entirely free from the difficulty.

The buckwheat is sown at the usual time, but before harrowing, a bushel of rye is sown with it to the acre; they both come up together, and the buckwheat, being much the most rapid in growth, soon obtains the ascendancy, the rye only forming a smooth green carpet beneath, which completely prevents the dashing of the grit of the soil by rain upon the buckwheat when it is cut, and otherwise keeps it clean. After the crop of buckwheat has been removed, the rye obtains sufficient growth before winter, and the next season affords a good crop of itself. Thus, the buckwheat is protected, and two crops obtained from a single seeding.

PLANTING TREES BY THE ROAD-SIDE.

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NOTHING adds more to the beauty and interest of a country, than shade or fruit-trees by the sides of the roads. Of forest trees, the most proper for this purpose are elm, white ash, hickory, black walnut, and rock or sugar maple. A favorable time for transplanting, is as soon as the frost is out of the ground; it should by all means be done before the foliage puts out. Those trees which have grown in a dense forest, will not usually flourish very well on being transferred to the open air. It is better, therefore, to procure for transplanting such as have grown as much as possible in an open exposure. Decidedly the best are those raised in nurseries from seed, or which have been taken from the woods or fields soon after they have vegetated.

It is sometimes objected that trees prevent the roads from drying by shading them too much. On roads which run east and west, there is some liability of this taking place; but on those the course of which is nearly north and south, the sun is not as much obstructed. If roads were, however, laid out sufficiently wide, say four rods, and the trees were not planted at less distances than two rods, we think little or no injury would be experienced from shade.

When in Vermont last season, we noticed in many instances, that the roads were bordered by rows of the sugar maple, and that the sap of the trees was used for making sugar. Some of them were the handsomest trees, and the most productive in sugar of any we have seen. Being allowed plenty of room, they throw out numerous branches, and the tops generally assume a regular conical form, while from the abundance of leaves the sap is well elaborated, and the saccharine principle largely developed.

The white ash and the black walnut, grown in open situations make valuable wood or timber for various purposes. "Pasture ash," as it is called, is nearly as valuable as white oak for any purpose, and for some purposes, such as handles for pitch forks, hoes, &c., it is the best of all wood. No better mode of raising this valuable timber could be devised, than to plant the young trees beside the highways. They will grow readily in nearly all situations, are ornamental in their appearance, and are not liable to be injured by the attacks of insects. All trees when first transplanted, should be protected by a strong pen of boards and stakes, from the attempts of cattle and other animals, to rub against them.

WORMS IN THE BOWELS OF ANIMALS.

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THE origin of some forms of animal life, particularly of some parasites, has at various times occasioned much discussion. Though it is by some strenuously denied that life in any form is ever produced spontaneously, there are certainly cases where we can assign no other cause. Parasitic animals are found springing into life under circumstances which seem to preclude the possibility of their having been produced by the ordinary laws of generation. Thus we find the fluke in the liver and biliary ducts of sheep, affected with the *rot*, the hydatid in the brain, and, stranger yet, insects of various species in the bowels of animals while in the fœtal state.

An article on "*bots*," in the *Prairie Farmer*, by John Maddock, records a striking instance of this kind. He states that John Lee, of Decatur, Macon co., Ill., "had a mare with foal that died before foaling; the foal had no hair on it; he cut it open and found bots in it." We presume there must have been some mistake about the insects found being "*bots*," that is the larva of the *œstrus equis*, as the economy of that insect is well known, but we can hardly doubt that *some* insect was found, and whatever species it might have been, their existence is none the more easily accounted for.

CONDENSED CORRESPONDENCE.

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PRODUCT OF A HALF ACRE.

H. W. Crosby, La Fayette College Pa., states that he gathered last year from half an acre, 212 bushels sugar beets, 92 bushels carrots, 20 bushels turneps, and 450 merchantable cabbages. The ground had no manure last year, but the year before it had a good dressing. It was plowed twice, very deep, (about 13 inches,) then thrown into ridges eighteen inches apart, the ridges raked and the seed sown. The plants were thinned to six inches in the row. The turneps were only sown where the carrots missed.

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LIEBIG'S THEORY OF ARTIFICIAL MANURES.

We make the following extracts from a letter on this subject signed **Dairyman Farmer**:

"Although I think the communication written by Liebig, published in your December number, is worth the full price of a year's subscription, yet I think some of his conclusions and assertions have a tendency to mislead new beginners and give them to expect more certainty in agricultural operations than facts will warrant. I will only notice a couple of instances. First, he says—"The system of draining, which of late has been so extensively followed in England, brings the land into the state of a great filter, through which the soluble alkalies are *drawn off*, in consequence of the percolation of rain; and it must, therefore, become more deficient in its soluble efficacious elements." [See Cultivator for Dec., 1844, p. 364.] Can it be that injury has resulted to the lands from this cause? I think not.

"Again he says, (same page) if chemists succeed (as he has no doubt they will,) 'in combining the efficacious elements of manure in such a way as that they will not be washed away—their efficacy will be doubled; if in this manner the injurious consequences of the present system of draining be removed, agriculture will be based upon as certain principles as well arranged manufactories.'

"Now every farmer of experience knows that the results of his operations depend in a great degree on the season, over which he has no control. He certainly cannot prepare his land against wet and drouth, heat and cold at the same time. We lose at least one crop in four on account of unfavorable weather."

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DISEASE IN COWS.

A "**Dairyman Farmer**" writes that in the spring and summer of 1840, his cows were attacked with a swelling about the head and jaws. "The first" (says he) "that I observed of it, one of the cows refused her food, and on examining her, I found that she was so swollen about the mouth and eyes that she could scarcely see. I had her bled immediately, and in fifteen minutes she began to feed. The swelling soon went down, and the next day she appeared as well as ever. In the course of the summer, five or six others were taken in the same way, though we generally discovered it before they were as bad as the first. They were all, however, more or less swollen, and some of their bags were affected. Copious bleeding invariably cured them. I have sometimes given four or five quarts of thoroughwort (bone-set) tea, one or two quarts at a time."

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PROFITS OF HENS

Mr. James L. Cox, Zanesville, Ohio, gives us the results of an experiment he made for the purpose of ascertaining whether hens would be profitable. He says: "In Dec. and Jan. last, (1844, '45,) I sent out to a man who has charge of our coal-banks and farm, 24 hens and one cock. One would think the number of hens too large, but the eggs hatch very well—say 110 eggs set, hatched 75 chickens. This was previous to July 1st, 1845; and besides the eggs set, the hens laid in the same time, 1096 others. The grain eaten in that time amounted to $4.25. This was for six months. I intended to have kept the account for a year, but left home on the 4th of July, and did not return till September. I thought the produce pretty well for the time. I had them in a warm room with a stove in the room adjoining, which I think had a good effect, for after they commenced laying, they did not stop, let the weather be what it might."

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CROPS OF 1845 IN SOUTH CAROLINA.

Extract from a letter received from **W. S. Gibbes**, of Chestnut Grove, S. C., dated Jan. 1st, last:—"The past has been a deplorable year; the loss of crops and the suffering of the poorer classes, will long be remembered. The drouth injured us greatly, but the chinch bug more—injured our wheat, eat up our oats and destroyed fields of corn. I do not make more than one-fifth of a corn-crop, and not more cotton than enough to buy the corn needed—and yet I make a better crop than many of my neighbors. Some did not make a bushel of corn, or a pound of cotton. Many are killing off their hogs from the woods, having no corn to fatten them with; and their stock, because they cannot carry them through the winter, and cannot sell them in a country where there is no provender to be had. Thus you see, it is indeed hard times with us here. But this is a new year, and we hope for better things."

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TO KILL PEPPERMINT.

In relation to an inquiry for a mode of exterminating this plant Mr. **George Hampton**, of Perth Amboy, N. J., writes as follows:—"A farm on which I resided some eight years since, had a small patch overrun with peppermint and spearmint. I converted it into a sheep-pasture for two years, and when I left the farm, which was nearly three years ago, there was scarcely a plant of it to be seen. I have no doubt that by pasturing it with sheep for five or six successive years, it may be entirely eradicated."

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STUDY OF AGRICULTURE IN SCHOOLS.

Mr. Paris Barber, of Homer, writes us as follows: "The effort of Mr. Woolworth, the principal of our Academy, to introduce the study of agricultural chemistry and geology, has met with great success. He has a fine class of young men—from 25 to 30—farmer's sons, from this and the adjoining counties, and I can assure you, they are deeply interested. He also gives a separate lecture to the farmers every Friday evening, at which fifty or seventy-five are present, and are much benefited." We are pleased to receive this information, and regard it as an indication that the plan of introducing the study of agriculture into schools, is destined to succeed.

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EARLY POTATOES.

Mr. E. T. Clark, Providence, R. I., to whom we sent some of Mr. **Hall's** early June potatoes, writes in reference to them as follows:—"The potatoes I had of you turned out remarkably well. A sample sent in to the exhibition of the R. I. Horticultural Society, were boiled and pronounced *first rate*. I have had more calls for them than I could supply, at a dollar a bushel. I planted them on the first of May, and in just sixty days had them on the table of the size of small hen's eggs."

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EFFECTS OF LIME.

Rev. **J. N. Candee**, New Albany, Ia., relates the following:—"In a field in which I planted corn last spring, a lime-heap, (a heap of logs on which a quantity of lime-stone had been placed,) had been burnt more than twenty years ago. The gentleman who was on the place when I purchased it, being here during the summer, remarked that he presumed that he could show me by the corn, the very spot where such a log-heap had been burnt. I had before noticed an uncommon strength of stalk on the spot, but was not aware of the cause, until he took me to the place." We would suggest this query in regard to the above—Was the extra growth of corn owing to the lime or the ashes of the logs burned with the lime? We have seen the effects of charcoal-pits in the extra growth of grain and grass on various soils, for more than twenty years after they were burnt.

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ONEIDA COUNTY AG. SOCIETY.

THIS Society held its annual meeting at South Trenton, on the 8th of Jan. Rev. Dolphus Skinner, of Deerfield, was elected President; Benj. N. Huntington, of Rome, Rec. Secretary; Jno. Rixley Burgett, Westmoreland, Cor. Secretary; William Bristol, of Utica, Treasurer. Ten Vice-Presidents and five Managers were appointed, among whom we notice the names of many excellent farmers and efficient members of the society, who, with the gentlemen above named, will take good care of the interests of the society the ensuing year.

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OSWEGO COUNTY AG. SOCIETY.

M.r H. L. R. **SANFORD** writes from Volney, that "The Annual meeting of the Oswego Co. Ag. Society was held Jan. 7, when the following officers were chosen for the ensuing year. The next fair is to be held at Fulton, on the last Tuesday and Wednesday of Sept. next."

B. E. Bowen, President, Mexico;
G. F. Falley, Fulton,
Samuel Foot, Phoenix, } V. Pres'ts.
R. K. Sanford, Cor. Sec'., Fulton;
G. Salmon, Rec. Sec'y;
I. I. Wolcott, Treasurer;
Wm. Ingalls,
H. L. R. Sanford, } Executive Committee.
D. R. Case.

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HOUSES OF LIME, SAND AND GRAVEL.

T. **WINCH**, Cleveland, O., gives us the following account of building houses of these materials.—"I read in Ellsworth's Report of last winter, the manner of building cheap houses of unburnt brick; but I think they have an improvement in Wisconsin over all others. The material consists of gravel and lime—one-eighth part lime, and the balance of course sand and any kind of gravel or small stones, mixed so to make a mortar that will "set" so hard as to stand well. I saw at Prairie du Lac, Rock Co., two buildings of this material—one a blacksmith's shop, the other a seminary of two stories. Both appeared to be perfectly substantial. The proprietor, Mr. Goodrich, took a hammer in the shop to show me how strong the mortar was, and actually broke a stone that protruded from the wall before he loosened it. They use clamps to build with, and deposite in them six inches of mortar each day, which gives it time to dry, and so on until the wall is finished."

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PROFITS OF GOOD HUSBANDRY.

A. **VAN BERGEN**, Esq., of Coxsackie, has given us the following memorandum of the last year's product and profit of three and a half acres of land:—200 bushels shelled corn—630 bushels ruta-baga—15 tons cornstalks. Charging all the labor at the highest rate, and crediting the produce at a fair market value, the nett profit afforded by the three and a half acres, was $67.49. After the crops were taken off, the land was sown in wheat.

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POUDRETTE.

BENJAMIN HICKS, of Great Neck, Queens co., L. I., states that in the year 1843, he manured his potatoes with *street manure* obtained from the city of New York. The crop was good. The next year, 1844, he planted the *same ground* with potatoes, *without* any *manure*; those potatoes that were *planted early*, were not *diseased*, but were of a good quality: of those that were planted in 1844 *late*, and with *barn yard manure*, on another piece of ground, fully one half of them were diseased and lost.

The last year, 1845, he manured his potatoes *entirely with Poudrette*, made by the Lodi Manufacturing Co., and the whole crop was sound and good, and a fair yield, considering the drouth. His neighbor whose land adjoining, the last year, 1845, planted all his potatoes *with barn yard manure*. The yield, it is said, was not more than *about half* as much as that of Mr. H., and they were so much diseased, that according to his estimate, he had not more than ten bushels left from the acre he planted.

The above discloses two important facts:

1—That *early* planted potatoes do not suffer by *disease* as those that are planted late.

2—That potatoes *manured with Poudrette* do not in some cases suffer by disease, as much as when planted with *barn yard or stable manure*.

H. W. C. states that he tried Minor's poudrette in connection with his own manufacture. It was used on potatoes, and the yield was above one-sixth in favor of his own. He says, however, Minor's poudrette is a very good manure, "but I do not think it as profitable as stable manure, where the latter can be had for $1 per two-horse load—carting it two miles, as we can get it here."

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LARGE CROP OF VEGETABLES.

JAMES ROBERTSON, of Windham Centre, N. Y., informs us that he gathered last year, from one acre and eight rods of land, the following produce:—

Ruta-baga,...............	819	bushels.
Sugar beets,..............	134	"
Carrots,...................	132	"
Total,..................	1085	

The ruta-baga grew on 122 rods of ground, and the sugar beets and carrots 23 rods each. The turnep ground which was sod, was plowed the previous fall, was harrowed well in spring, and cross-plowed in June, and fifteen loads of manure from the sheep-house spread, and the ground again harrowed well. With a small plow it was then thrown into ridges about seventeen inches apart, and the seed sown about the 10th of June, in drills, and the crop was hoed twice. The beets and carrots grew on ground which the year before was occupied with ruta-baga. It was plowed deep and a light coat of sheep manure spread and harrowed in. The crop was sown in drills fourteen inches apart, about the first of May, and was hoed twice.

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THE PUMPKIN.

EXTRACT from a letter written by **ALEX. LEEDS**, St. Joseph's, Michigan:—"I remember seeing, I cannot say when or where, that pumpkin and squash seed steeped in a solution of chloride of lime, were up and in the rough leaf, while those not steeped, were but bursting above the ground, though planted at the same time. The benefit to the fruit was not mentioned. It may answer to hasten the vine when the seed is planted late. I also would like to see an analysis of the pumpkin. I have been told that some farmers make an oil from the pumpkin seed, which burns very well and gives a good light."

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FARRIERY.

A correspondent, signing "JULIUS," and dating at Cornish, N. H., thinks he practices a system by which cows may always be delivered of calves without injury. He says—"When a calf is presented tail foremost, if the cow has been making exertion any length of time, the calf will generally be found lifeless, and thrown back so far that it is impossible to push it far enough forward to turn it so that the presentation shall be natural. In all unnatural presentations, my first step is to see if the calf can be placed in a natural position by turning or raising—if not, my next step is to let one person pull moderately upon the tail while another slips up his hand beside the calf and presses back, at the same time, the external parts of the cow, so that the haunch of the calf presents itself, and I am able to cut into and dislocate the socket [hip] joint, which will turn up in such a manner that I can attach a strap to the whirlbone, and then let the person at the tail take the strap and draw steadily whilst I split the flesh and skin of the leg and flay it from the bone as far down as the gambrel joint, turning it, as you ese, wrong side out. By this process about one quarter of the calf is extracted. I then turn the cow on the other side, and deal with the other hind leg in the same manner, and the cow, with very little exertion to herself, and without any danger to her, is readily delivered."

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VALUE OF THE CULTIVATOR.

We might fill pages with extracts from private letters attesting the value placed upon the Cultivator, could any public object be accomplished by it. We give the following, merely to show that it is useful to others as well as to farmers. A subscriber at Meriden, N. H., says—"Though engaged in trade and cultivating only a garden, I think I can hardly spend a dollar better than by renewing my subscription to your paper Aside from its interest to the practical farmer, it contains useful hints enough in domestic economy, and matters in which *all* are concerned, who have a family at least, to much more than compensate for the trifling sum asked for it."

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THE WINTER IN VIRGINIA.

Wm. A. Staples, Amherst co., Va., writes under date of Jan. 4th last—"We have had some cold weather this winter. Our canal has been closed for two weeks, but all is fair again, and plows are now running.

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GRAZING IN EASTERN PENNSYLVANIA.

Extract of a letter from J. Price, Esq. to the Cultivator: "The eastern part of Pennsylvania is becoming every year more and more engaged in the grazing business—but little attention is paid to raising cattle, the graziers depending almost altogether for a supply of beef cattle from N. York, Ohio, &c., &c. According to the best estimate I am at present able to form, the number fattened annually in this county is between forty and fifty thousand head. Lancaster, York and Dauphin are fast following the example of Chester. The reason of this is that the distillation of grain into whiskey is fast going out of practice. I believe there is not a single distillery in operation in this county at present, and at least three-fourths of them in Lancaster and adjoining counties are defunct, and I think will soon cease altogether."

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PRICES OF PRODUCE IN TENNESSEE.

Samuel T. Bicknell, of Blount co., Tenn., writes under date of Dec. 27th last, that pork is worth $3 per hundred pounds—corn 20 to 25 cents per bushel—wheat 50 to 75 cts., and that farmers cannot supply the demand for all kinds of produce—that many of the South Carolinians had sent the greater portion of their stock into East Tennessee to be wintered. Mr. B. pays us a compliment in regard to the influence of the Cultivator in in his neighborhood—the perusal of which, he is pleased to say, "tends to the improvement of the land, and consequently adds to the contents of the pocket, so that the subscribers make one step towards economy."

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COMPLIMENT TO AN AMERICAN AUTHOR.

Mr. Tucker—I deem it proper that the pages of the Cultivator should record the flattering compliment recently paid by a royal personage to Mr. A. J. Downing, one of our citizens well known for his works on Landscape Gardening, Rural Architecture, &c., which from their publication on this side the water, have been regarded with high admiration, and are already considered as standard works.

His work on Landscape Gardening has also attracted attention in Europe, and has been greeted there with many expressions of commendation. The Queen of Holland has lately forwarded to Mr. Downing an autograph letter, together with a magnificent ruby ring, encircled by three rows of diamonds, in acknowledgment of the pleasure which she has derived from the perusal of his book. Perhaps no similar recorded instance can be found of a royal autograph having been added to the gift of a jewel by way of giving stronger emphasis to the expression of admiration.

A. of the North.

TRANSPLANTING TREES.

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Very few who have been accustomed to the culture of fruit trees and to transplanting young trees from the nursery, are aware of the great improvement resulting from a frequent previous transplanting, before removal to the garden or orchards. Having made a good many observations on this point, we have given in the annexed wood-cut, fair representations of the roots of two young trees, fig. 18, exhibiting the usual appearance of a tree which has stood on the spot where it came up from the seed, and fig. 19, the roots of a tree which has been two or three times transplanted. The former has but few roots, and those extend to a distance in the soil; the latter has a multitude of short fibres, necessarily resulting from the successive cutting off of the longer roots in removal, and producing in their place the growth of many shorter ones. Hence in taking up a tree thus previously prepared, little risk or check in growth is experienced, as the entire mass of fibres is easily preserved from mutilation in digging. But a tree of equal size which has not been transplanted before, has established itself by a few long roots, firmly in the soil; and these must be more or less torn in removal; hence the consequent check in growth and danger to the life of the tree.

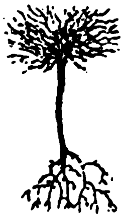

Fig. 18

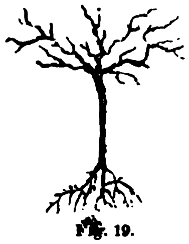

Fig. 19.

Fruit-trees which have been well prepared previously for transplanting, by this method, may be removed with greater safety even when so large as to be in a bearing state, than if less than half that size, without such preparation. It is by practicing this method, that nursery-men in some parts of Europe are enabled to show to purchasers their trees for sale in full bearing and with handsomely formed heads. It is obvious that in setting out such trees, more care is needed in spreading out the numerous fibres, in the natural position in which they grew, and in filling in all the interstices with fine earth; and that the practice of dashing in a few quarts of water when the hole is partly filled, to carry the earth into all the small crevices among the roots, is quite important. Where, also, this practice is pursued, greater fertility of soil is needed, to counteract the slightly retarding effect of successive removals

BRIDGE PLANK FOR WHEEL-BARROWS.

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In wheeling manure, muck, sand, &c., on garden beds, and in removing from them various kinds of litter and refuse matter, the box-edging is very often injured by crossing and re-crossing. To secure edgings from any danger of the kind, provide a *bridge-plank*, tapering at each end, and with a space cut beneath for the box, over which the wheel and the feet of the gardener may pass without the slightest injury to the edging or obstruction to the work.

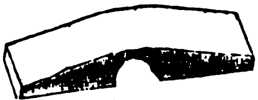

Fig. 20.

Moss on roofs, accelerates the decay of shingles, and may be prevented or destroyed by sprinkling white lead on the upper part of the roof, so that the rain may wash it over the roof.

Cheap culture of Potatoes.—A correspondent of the Boston Cultivator plants in hills, which he covers lightly, by a plow, with earth as soon as the potatoes are above ground. When they come up again through this light covering, he repeats the operation by cross-plowing, covering up as before. The potatoes are never injured, and a great saving of labor is effected.

NEW YORK STATE AGRICULTURAL SOCIETY.

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The annual meeting of the Society was held at the Capitol in this city on Wednesday the 21st January. The number of people in attendance was greater than at any previous similar meeting, and an unusual interest was manifested.

A report was received from Dr. Lee, in relation to the duties which he, as Corresponding Secretary of the Society, and as a public Lecturer, had performed during the past year.

The report of the Treasurer was read, showing as follows:

Balance in treasury at last meeting,	$3.932.09
Interest on stock, ...	210.00
Donation from Francis Granger, ...	25.00
„ from R. L. Pell, ...	5.00
Received from State Treasury, ...	700.00
Receipts from individual members, ...	80.00
„ at State Fair, ...	4.370.18
	$9.322.27
Payments	
On account of Premiums, ...	$2,411.50
Salary of Recording Secretary, ...	300
Public Lecturer, ...	180
Printing and binding, ...	187 39
Expenses at Fair at Utica, ...	556.94
To H. O'Reilly, ...	48
Sundry incidental expenses, ...	92.23
	$3,776.06
Invested in Albany city stock, ...	3,000.00
" Bond and Mortgage, ...	2,000.00
	$8,776.06
Leaving in the treasury a balance of	$546.21

On motion of Mr. Comstock, a committee, consisting of three from each Senatorial district, was appointed to nominate officers for the ensuing year, and to recommend to the Executive Committee a suitable location for holding the next Cattle Show and Fair.

On motion of Mr. L. F. Allen, a committee was appointed to prepare business for the action of the meeting. The chair appointed Messrs. Allen of Erie, Comstock of Albany, Pratt of Greene, Walbridge of Tompkint, Lee of Monroe.

Mr. Allen, from the business committee, reported the following resolutions, which were adopted:

Resolved, That a dairy committee of three persons be appointed by the Executive Committee of the Society whose duty it shall be to ascertain the actual product of the best cheese dairy of the State, that the locality of such dairy be ascertained in latitude; the composition of the soil as near as may be where the dairy farm be situated; the kind of grass used for pasture and for hay; the quantity, in pounds, of milk per cow on the average and in the aggregate; the quantity of cheese to the hundred pounds of milk produced; the gross quantity for the season of milk and cheese produced, the quality of the cheese, the method of making it, the breed of cows composing the dairy, and all such other details as shall determine the most profitable mode of conducting the cheese dairy business, and that one hundred dollars of the funds of the Society be appropriated in giving three premiums to the most successful competitors reporting any such practice and its detail to said committee, said committee to report to the Society at its next annual meeting.

Resolved, That a committee of —— be appointed by the Executive Committee who shall report to the next annual meeting a list of not exceeding 30 kinds of apples, which shall be in their opinion best adapted to the economical demands of the people of this state, and to be best suited to the different localities of the same, comprising their most extensive use in all seasons, for home consumption, and for exportation, the individual names of said fruits, a drawing of each separate kind, with a particular description thereof; and that in this connexion they also take into consideration the several classes of fine fruits as adapted to the above purposes, and —— dollars be appropriated as in the judgment of the Executive Committee shall be necessary to accomplish this object.

Wednesday Evening, Jan. 21.

The Socitey convened pursuant to adjournment at the Assembly Chamber.

Mr. Denniston from the committee to nominate officers, reported the following list which was unanimously adopted:

J. M. SHERWOOD, Auburn, President.

VICE-PRESIDENTS.

Robt. H. Ludlow, New York,
Abram Bockee, Federal Store,
Ezra P. Prentice, Albany,
Thos. J. Marvin, Saratoga Springs,
Pomeroy Jones, Lairdsville,
J. R. Speed, Caroline,
H. S. Randall, Cortland Village,
Lewis F. Allen, Buffalo.

Luther Tucker, Albany, Recording Secretary.
Joel B. Nott, do. Corresponding do.
J. M'D. M'Intyre, do. Treasurer.

ADDITIONAL MEMBERS OF THE EX. COMMITTEE.

Alfred Conklin, Auburn,
Ami Doubleday, Binghampton,
George Vail, Troy,
Ambrose Stevens, New York,
John Miller, Truxton.

The same committee also recommended Auburn as the place for the next Cattle Show and Fair.

Prof. Hall exhibited a Geological Map of the State with the average product of wheat in each county, and made some very interesting remarks in explanation of the connection of Geology and Agriculture, for which the Society tendered him their thanks.

Gen. Harmon read the report of the committee on Wheat, Barley, &c.

Mr. E. Kirby gave notice that a proposition will be presented at the next annual meeting so to alter the constitution of the Society that all ex-Presidents shall be standing members of the Executive Committee in addition to the board as now provided for.

Thursday Morning, Jan. 22.

The Society met in the Lecture Room of the Young Men's Association.

Col. Sherwood read the report of the committee mitttee on Peas, &c.

Prof. Emmons, from the committee on Essays, made an interesting report, concluding with the list of prizes awarded.

Dr. Beekman, chairman of the committee on Farms, made a very interesting and valuable report, giving in a condensed form, a great variety of valuable information, derived from the papers submitted to the committee.

Dr. B. also read a very interesting communication from S. S. Randall, Esq., on the Agricultural statistics of the state.

Mr. Pratt, of Greene, from the business committee, offered the following resolution, which was adopted:

Resolved, That the Executive Committee be requested to take into consideraion the expediency of offering the like premiums, or of less amount, on the subject of the butter dairies of this State, to be conducted in the same manner, and under the same rules of particularity in ascertaining its results as have been adopted by the Society at its present session in relation to cheese.

Thursday Evening, Jan. 22.

The Society met at the Assembly Chamber, when the annual Address was delivered by the President, B. P. Johnson, Esq. As it is to be published, it is sufficient to say of it, that is was alike creditable to the Society and its author.

On the conclusion of the Address, Mr. Johnson introduced the President elect to the Society, who, before taking the chair, briefly returned his thanks for the honor conferred upon him by the Society in electing him their President, an honor of which the highest individual in the country might well feel proud.

On motion of Dr. LEE, of Erie, it was unanimously

Resolved, That this Society highly appreciate the services of its late President, B. P. JOHNSON, as the presiding officer of said society, and that he has its thanks for his highly instructive and interesting address, just delivered before this body, and that he be requested to furnish a copy for publication.

On motion of Mr. STEVENS, of New-York,

Resolved, That the thanks of this Society be given to the officers of the Society whose terms expire this day, for the able and faithful manner in which they have performed the duties of their offices during the past year.

On motion of Judge CHEEVER, of Saratoga,

Resolved, That a committee of three be appointed to ask the Legislature, on behalf of this society, to cause to be prepared by the State Geologists, or others, an abridgment of the Geological survey of the State, which shall embrace the geological map and sufficient of Geology to make the map intelligible to the common reader and shall also fully exhibit the connection between the geology and agriculture of the State, and which can be afforded at a small price.

Messrs. Lee, Johnson and Beekman were appointed the committee under the above resolution.

On motion of Mr. Allen, of Erie,

Resolved, That this Society view the proposed effort of Messrs. HARMON & LEE, to establish a scientific and practical shool of agriculture in the county of Monroe, with approbation. We consider its object as highly beneficial to the agricultural interests of the State, and recommend it to the public approbation and patronage.

On motion of Mr. JOHNSON, of Oneida,

Resolved, That the Institution at Aurora, Cayuga co., under the charge of C. C. YOUNG and DAVID THOMAS, is one worthy of the attention of farmers, combining as it does scientific with practical agriculture.

On motion of Mr. FULLER, of Onondaga,

Resolved, That we recommend to the attention and patronage of the public the Agricultural School of Mr. WOOLWORTH of Cortland county.

On motion of Mr. BLOSS, of Monroe:

Whereas it is very desirable to have weekly meetings of the friends of agriculture, for the purpose of free discussion, therefore

Resolved, That such meetings be held during the present session of the Legislature, and that the Secretary be directed to apply to the Hon. the Assembly for leave to hold meetings in this chamber every Thursday evening.

On motion of Mr. JOHNSON, of Oneida,

Resolved, That the thanks of this Society be most cordially tendered to the Hon. the Assembly for the use of their Hall for the meetings of the Society, and that the Secretary communicate this resolution to the Speaker of the House.

The following is a list of the premiums awarded:

ON ESSAYS.

On the importance of scientific knowledge in prosecuting agriculture; to John J. Thomas, Macedon, $100.

On the culture and manufacture of silk; to H. P. Byram, Brandenburg, Ky., $10.

On the Potato Rot; to Andrew Bush, East Coventry, Pa., $20.

On Irrigation; to John J. Thomas, $20.

ON FARMS.

1. To Geo. Geddes, Fairmount, $50.
2. To Wm. Buel, Rochester, $30.
3. To Wm. Garbutt, Wheatland, $20.

Sets of vols. Transactions, to

W. P. Capron, Macedon, Wayne Co;
Jonathan Tallcott, 2d, Rome, Oneida Co.;
Rufus S. Ransom, Perryville, Madison Co.;
Daniel Gates, Sullivan, Madison Co.;
N. S. Wright, Vernon, Oneida Co.;
Tyler Fountain, Peekskill.

ON WINTER WHEAT.

1. To Edward Rivenburg, Vernon, $15.
2. To Stephen B. Dudley, E. Bloomfield, $10.
3. To Abraham Fairchild, Arcadia, 2 vols. Trans.

To Samuel Davison, Greece, a discretionary premium of eight dollars for report on experiments on the culture of wheat.

SPRING WHEAT.

1. To Robt. Eells, Westmoreland, $15.
2. To Erastus Dayton, Vernon, $10.

BARLEY.

1. To Hiram Mills, Martinsburg, $10.
2. To N. S. Wright, Vernon, $5.
3. To S. B. Dudley, E. Bloomfield, Vol. Trans.

OATS.

1. To Elias J. Ayres, Trumansburg, $10.

INDIAN CORN.

1. To Geo. Vail, Troy, $15.

PEAS.

1. To Thos. Lane, Marcy, $10.
3. To Wm. French, Canajoharie, $5.

FLAX.

1. To E. C. Bliss, Westfield, $5.
2. To Rufus S. Ransom, Perryville, Vol. Trans.

CARROTS.

1. To Wm. Risley, Fredonia, $10.
2. To Lucius Warner, Vernon, $5.

MANGEL-WURZEL.

1. To Charles B. Meek, Canandaigua, $10.
2. To Lucius Warner, Vernon, $5.
3. To J. F. Osborn, Port Byron, Vol. Trans.

SUGAR BEETS.

1. To S. B. Burchard, Hamilton, $10.
3. To J. F. Osborn, Port Byron, Vol. Trans.

RUTA-BAGAS.

1. To John G. Smedburg, Prattsville, $10.
3. To. C. B. Meek, Canandaigua, Vol. Trans.

BROOM-CORN.

There was but one application, that of E. C. Bliss, of Westfield, to whom the committee awarded a copy of Colman's Tour.

DEATH OF E. W. BULL, ESQ.—We learn with regret the death of this valuable citizen, late of Hartford, Connecticut. He evinced a deep interest for the advancement of agriculture and horticulture, to which he contributed important aid. We copy the following notice of his death from the Hartford Courant:

"The death of our late esteemed fellow citizen, E. W. Bull Esq., is calculated to produce the deepest feelings of grief. Few could be removed from among us whose removal would cast more gloom over the face of the community. He was taken away, in the prime of business life, in the full vigor of active and energetic manhood. He was a man whose death will be very keenly felt, and will produce a large vacancy in the circle in which he moved. Of superior business capacity, he devoted himself to the daily avocations of life, with great energy, and with unwonted perseverance.

"As the proprietor of the High Street Garden, his taste and activity in horticultural pursuits, have long made that a spot of delightful resort to very many of our fellow citizens, and to many strangers, to whom he extended the courtesies so grateful to those who visit our city for a season. Many and deep sympathies will be felt for the relatives who are mourning his sudden decease."

HARTFORD COUNTY AG. SOCIETY.—We have received several papers containing the doings of this society for the last year, which in many respects we find interesting. There is one thing however which strikes us as being very defective. We notice that the premiums on "blood stock," and some other descriptions of stock, were awarded without the names of the owners, or the animals, or the breed of the animals being mentioned. We have no objections to this plan so far as regards the *award*—we think in fact that it has several advantages—but where the report goes out to the world, it seems proper that both the name of the owner and the breed of the animal should be stated, otherwise we do not see how the community is to know what stock is most approved.

THE CULTIVATOR.

ALBANY, FEBRUARY, 1846.

TO CORRESPONDENTS.

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We have to acknowledge the receipt of communications since our last, from Prof. E. N. Horsford, D. T., A Subscriber, H. Luther, P. Davidson, A. T., Dr. Andrew Stone, A Farmer, E. Marks, Edgecomb, Eaton, S. H. Smith, Luman Lane, H. W. Crosby, Andrew Bush, T. Minot, A. of the North, Prof. L. Vanuxem, G. Butler, G. W. B., S. B., W. S. G., R. A. A., Ira Brayton, H. B. Tuttle, J. B., P., J. Townsend, Geo. Vail, E. Comstock, Seth Whalen, D. Gold, R. K. Tuttle, Mary, J. Fennimore Cooper, J. D. Spinner, Quid Nunc, R. Julius, S. P. Henkel, Fair Play, Indigena, Old Bachelor, A. Delaware Subscriber, Th. Close, A. Wanzer, J. T. Nathorst, S. Osborn, H. H. B., Joseph Annin, A. E. E., Wm. Todd, W. H. Wills, Jason Smith, Nathan Wey, A. E. Ernest.

☞ It will be seen by the above, that we have been favored with an unusually large number of communications the past month. In this number we have given over FORTY of these favors, many of them to be sure greatly condensed; and we shall make room for those remaining on hand, as rapidly as possible. Our hearty thanks are tendered to the writers who have thus enabled us to give an interest and value to our pages which they could not otherwise attain.

☞ W. L. G. has our thanks for his sensible article on cement pipes; but since the publications on this subject in our last number, there seems at present no need of anything further.

A., TIFFIN, O.—We should be glad to hear a report of the "progress," to which you allude.

Lieut. S. H. D., U. S. A., has our thanks for his kind remembrance of the Cultivator, for which he has for years past, raised 7 or 15 subscribers at every place at which he has been stationed.

G. W. B.—Let us have the article you speak of, if you please.

MONTHLY NOTICES.

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STATE FAIR.—The next exhibition and fair of the N. Y. State Ag. Society is to be held at AUBURN, Cayuga county, on the 15th, 16th and 17th days of September next.

IMPROVED FLAILS.—We have received from John Moore, West-Springfield, Mass., a couple of flails, superior in finish and excellence to any we have before seen. One may be seen at this office, and the other at the agricultural warehouse, 23 Dean street. Mr. Moore will sell them at 75 cents singly or $7.50 per dozen.

CHAMPAIGNE CIDER.—Mr. C. L. Rundle, of Greenville, Greene county, has sent us a sample of his refined cider. We think it equal to any we have ever tasted, and would recommend those whose health would be improved by the use of the article, to apply to Mr. R. for their supply. We believe he made over two thousand barrels last year.

DOWNING'S WORK ON FRUITS.—We are gratified to learn that the sale of this work has been so rapid as already to require a third edition, though not nine months have passed since its first publication.

COLMAN'S TOUR—Part V.—We learn from the publishers that this part of Mr. Colman's European Agriculture is expected to be issued in a few days.

AGRICULTURAL SCHOOL.—We learn that Dr. D. LEE, who is now editor of the Genessee Farmer, in connexion with Gen. RAWSON HARMON, have formed arrangements for opening a school for the study of scientific and practical agriculture. It is to be located on Gen. H.'s farm, in Wheatland, about six miles from Rochester. We have not yet seen a plan of this school, but we presume a leading object will be to *test theories* by practical and careful experiment *in field culture;* and in doing this, in a proper manner, it cannot fail to be highly useful. Dr. LEE has devoted much study to the science of agriculture, and we believe has had considerable experience in the capacity of a teacher. Gen. HARMON is considered one of the best practical farmers in the State—in wheat culture, in particular, he has been quite eminent; and the community are under large obligations to him for his numerous and well-conducted experiments to test the relative value of a great many kinds of wheat. We wish the school success.

SILLIMAN'S JOURNAL.—It will be seen by the Prospectus in another part of this paper, that a new series of this truly valuable and national work, was commenced the present year, with some decided improvements over the former series, which had extended to 50 volumes. We commend it, most heartily, to public attention; and trust that the friends of science will no longer permit it to languish for want of that support which it so richly deserves.

APRICOTS FROM PLUM STONES.—An opinion was advanced by a correspondent in our December number, which should have been noticed and corrected at the time. He thinks the natural affinity of the plum and apricot is so strong, that a change from one to the other from seed may occasionally take place. As the plum and apricot are very distinct species, so much so as to be separated by some botanists into different genera, it must be obvious at once that such a change cannot in the nature of things take place, nothing of the kind having ever been known or proved in the history of the vegetable kingdom. We do not of course attempt to explain the case spoken of, not knowing all the circumstances of the case, and which evidently were not known to the observer; but where data is wanting, it is not necessary to resort to the absurdity of transmutation from seed; or the still greater absurdity, if possible, o transmutation by the influence of a stock.

MACHINE FOR SOWING WHEAT.—Rev. A. R. RUDER, of Mt. Jackson, Shenandoah co., Va., wishes information in relation to "a one horse machine with which (as it is said) one man or boy can sow with almost mathematical evenness, 20 acres of wheat in a day; and also of another implement for covering the seed which is said to do the work both better and faster than both the harrow or the plow." The machine is stated to have been used extensively last season in Western New York. If any of our readers can give any information respecting it, they will confer a favor.

☞ A Farmer's Club has been established at Penn-Yan, in this state. John Mallory, President; Uriah Hanford and John Hatmaker, V. Presidents; A. Bigelow, Secretary; F. A. Stebbins, Treasurer; H. P. Sartwell, Librarian. Success to all such associations.

MR. ALBOT'S HORSE CONSTERNATION.—We would call attention to the advertisement of this horse to be found in this number. We noticed him in our July number of last year. He had then, however, but just arrived in this country, and was in not very good condition to show; but we saw him subsequently at the state show at Utica, at which time he made a very fine appearance, and was, beyond a question, entitled to the first premium, which he received.

SKINLESS BARLEY.—JOHN D. SPINNER, of Herkimer, states that this kind of Barley has yielded much better with him than the common kind—that it usually weighs 61 lbs. per bushel, and that it makes good bread and "excellent warm biscuit." He also states that the grain is not liable to injury from the fly, and he thinks it worthy the attention of farmers in those sections where wheat is attacked by this insect.

DUTTON POTATOES.—In reference to the potatoes of this name mentioned in our last, Mr. STREET DUTTON wishes us to state, that they were not originally procured from a man "by the name of Dutton near Philadelphia," but were brought from that section by S. A. Law, Esq., of Meredith, and received the name of *Dutton* potatoes, subsequently.

Correction.—Cultivator for 1845, No. 337, in a description of Bog-cutter, for "forward beam of *steel*," read *sled*.

Prattsville, in the county of Greene, which it is now purposed to make the centre of a new county, was founded by the Hon. Zadock Pratt, in 1824. The establishment of a large tannery by that gentleman, and now carried on by him in connexion with John Watson, has been the cause of a rapid growth of the village, which now numbers two thousand inhabitants. It has three churches, three large and well-kept hotels, a bank with a capital of $100.000, seven stores, and a spacious brick academy which cost over $3.000, more than one half of which was contributed by Mr. Pratt. The tannery of Messrs. Pratt & Watson tans 60,000 sides of leather annually and employs a capital of about $250,000. The village also contains a large flouring mill, a foundry and mechanics shop, a satinett factory which turns out 150 yards of cloth per day, and a company has recently been formed for the manufacture of fancy cassimeres, with a capital of $15,000. We are informed that the enterprising gentleman, by whose industry and liberality this thriving village has been chiefly built up and ornamented, made "his first savings from picking berries in his leisure hours, and selling them for sixpence per quart."

ANSWERS TO INQUIRIES.

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Buckwheat as Manure.—"A Subscriber"—(Vernon Centre.) As to the relative advantages of clover and buckwheat, for plowing in as manure, we can only say that from our own experience, (which has not however been great on this point,) we think the effect of clover best. Whether buckwheat sometimes "leaves the land sour," is a question on which there is a difference of opinion. We have heard persons contend that it did so leave the land, though we have never experienced it. Perhaps the nature of the soil may cause a variation in its effects. We have never tried plowing it in except on rather light warm soils. We suppose it would be best to plow it in after it had attained its full growth. Most farmers who practice it, we believe, turn it in while in blossom; but if it was considered an advantage to have the crop renewed, it might stand till the seed had formed, enough of which would probably come up after it was plowed in, to cover the ground again.

Another correspondent asks whether the grain of buckwheat is injured by the honey being extracted from the flower. We cannot tell—who can?

Plowing.—Highlander, (Otsego co.)—You say you want a "plow that will turn a furrow 9 or 10 inches wide and 6 inches deep and lay it on the edge of the previous one, with the greatest ease to the team." We think there are several kinds of plows that will answer the purpose desired—such as Prouty & Mears' "5½ self-sharpening Centre Draft," some of the various patterns of the Worcester plow, and Delano's "Diamond" plow. All these may be had at the Agricultural Warehouse, 23 Dean street, this city. We do not consider "9 or 10 inches" a *wide* furrow, though we think it is wide enough.

Cow-pasture.—"Will cow-pasture hold its own without manure of any kind?" We suppose it understood the the manure made by the cattle while feeding on the ground, is to be left there. Whether the pasture would 'hold its own,' we think would depend much on the nature of the soil. If it was moist and natural to grass, it might not deteriorate; but in such land as the grass would be likely to die out, the pasture would of course decline in value. Besides, on moist soils, the manure is less wasted by exhalation, and its properties are more retained in the soil than on dry porous soils where the grasses could not flourish as well. As to the "quantity and quality of milk" produced from old pastures, or from those recently seeded, as we think much depends on the soil, also; but in good grazing districts, we believe the opinion is generally prevalent that old pastures afford the richest milk, though it may be less in quantity. The quere in reference to lime or plaster, it is impossible to answer. In the absence of any description of soil or location, it cannot be told which of these substances would be "preferable," or what quantity of either should be used. Experiment alone can give positive information on this point.

Bone Dust, &c.—S. M. N. (New Marlboro, Mass.)—There is no bone dust in this market. The price of Sulphate of Magnesia is 2¾ cts. per lb. by the quantity. Silicate of Potash is not for sale here.

Cream.—D. R. (Frederick co., Md.)—An experienced dairy-woman says she knows no reason why cream should "turn blue on the surface," unless it has stood too long, by which the cream settles to the bottom and the bluish watery fluid rises to the top. It is also suggested that it is best to keep cream but a short time, in summer—never till it is sour, if butter of the best quality is desired—and it is proper to stir the cream well every day, taking care when a new portion is turned in, to mix it thoroughly with the quantity before deposited.

Blight in Fruit-Trees.—L. L. (Summit co., O.) We cannot tell what kind of blight attacks your trees. If it is caused by a species of aphis, we do not see that any good could be effected by "putting iron around the tree." If it is the "fire blight," we do not know that you could do better than to prune off the limbs as fast as they die. What effect "electric conductors," placed under the trees, would have in protecting them from this blight, we know not—we don't suppose they would do any hurt.

"Horse Nettle."—E. W. J. (Fort Defiance, N. C.)—We do not know the plant you allude to under the name of "Horse nettle"—therefore can give no directions as to its extirpation. Others may be able to give the information wanted.

Cutting down hay-mows.—H. W. C. (La Fayette College, Pa.)—It is always best to expose hay as little as possible to the air, after it is cured; and by cutting down a part of the mow at a time, less surface is exposed than by throwing off the whole top. But as to the precise "per cent saved" in this way, we have never seen it *cyphered* out—and the same may be said in regard to the loss by "evaporation" in moving a stack of hay "three miles in a still day."

Water Lime.—A. C. (Brandywine, Del.)—The best kind of water lime can be had in this city at a dollar and a half per bbl.

"Family Almanac."—A. L. (St. Joseph, Mich.)—We do not know that such a work has been published.

Disease in Sheep..—L. N. (Chautauque co., N. Y.) wishes to know the name and proper treatment of a disease among his sheep, which he says affects them as follows:—"A sore commences on the end of the under lip, very small at first, but enlarges from day to day for four or five days, when the upper lip and end of the nose become sore in the same way, and after a few days the sore extends back, and the whole nose becomes sore to the corners of the mouth, continuing so for a week or ten days, when it begins to get well."

Glanders.—J. B. (Hartford, N. Y.)—We would refer you to Dr. George Wright, of this city, veterinary surgeon, for the information you want in reference to the disease of your horse.

analysis of Indian Corn.—O. W. S. (Lee, N. Y.)—We do not know of any analysis of this plant that could be relied on. When Mr. John P. Norton returns to this country, which will be next season, he will probably analyze it accurately, and make known the result.

Sunflower seed and oil.—A. P. G.—The seed may be planted in rows four feet apart, and the plants thinned to two and a half feet apart, cutting to cure as for corn. Fifty bushels of seed per acre on rich land with high cultivation, is considered an average yield. We cannot state the market value of the seed per bushel. The method of making the oil is the same as that of linseed oil; but the seed should be hulled, which is readily done by machinery, else the yield of oil will be one half less. When well managed, a gallon of oil may be obtained per bushel. The oil is excellent for lamps—has no smoke or offensive smell—and is preferred by many for table use to olive oil. The oil is also used in the preparation of fine soaps. The seed is excellent for fowls.

TO OUR AGENTS.

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We should be ungrateful indeed, did we fail to return our acknowledgments to those kind friends who have enabled us, in almost all cases without any compensation other than that derived from the gratification of benefitting the public, to acknowledge the receipt of over *Nine Thousand* subscribers the last month, being more than 1,000 over the number received in the same month last year. We should be glad, did circumstances permit, to render our personal thanks to each individual who has so kindly lent his services to aid us in promoting the circulation of "The Cultivator," and thus, as we trust, to awaken an increased attention, on the part of our farmers, to the lights which science and experience are shedding upon the pursuits of Agriculture. Annexed is a list of the post-offices, from which orders have already been received for 20 or more copies of our paper for the present year:

New-York.	
Auburn,	200
Amsterdam,	20
Buffalo,	53
Barcelona,	2
Butternuts,	30
Baldwinsville,	25
Binghamton,	23
Cedarville,	20
Champlain,	20
Clyde,	20
Cooperstown,	37
Chittenango,	23
Cazenovia,	22
Cobleskill,	20
Easton,	20
Eaton,	43
E. Bloomfield,	25
Esperance,	25
Fulton,	26
Geneva,	52
Hartford,	35
Hillsdale,	23
Hudson,	25
Ithaca,	23
Livonia,	21
Madison,	21
Manlius,	2
New-York,	51
Newburgh,	21
Nunda Valley,	2
Oxford,	20
Owego, 30, Oswego,	40
Palmyra,	23
Plattsburgh,	20
Poughkeepsie,	41
Perry,	21
Rome,	25
Rochester,	90
Richmond,	23
Rushville,	20
Schenectady,	21
Syracuse,	10
So. Middletown,	20
Troy,	35
Utica,	27
Vernon Centre,	23
Whitesboro,	21
Watertown,	38
Waterloo,	20
Pennsylvania.	
Carlisle,	49
Greensburg,	26
Lancaster,	30
Newville,	21
Pittsburg,	90
Philadelphia,	106
Waynesburg,	22
Massachusetts.	
Boston,	172
Fall River,	31
Northampton,	26
Springfield,	53
Willbraham,	20
Connecticut.	
Bristol,	22
Cheshire,	21
Colchester,	20
East Haddam,	21
Farmington,	33
Jewett City,	21
Middletown,	27
New-Haven,	100
New-Milford,	22
Ridgefield,	22
Suffield,	20
Watertown,	21
Winchester,	21
Vermont.	
Brandon,	27
Charlotte,	23
Derby,	25
East Poultney,	28
Grand Isle,	25
Middlebury,	20
Manchester,	20
Vergennes,	21
Waitsfield,	20
Williston,	25
Delaware.	
Wilmington,	50
Rhode-Island.	
Providence,	64
Kentucky.	
Frankfort,	33
Louisville,	27
Lexington,	45
Paris,	68
Shelbyville,	20
Versailles,	32
Georgia.	
Macon,	21
Michigan.	
Ann Arbor,	40
Ypsilanti,	35
Dist. Columbia.	
Washington,	22
Ohio.	
Aurora,	20
Gustavus,	22
Canada.	
Montreal,	26
Quebec,	38
Simcoe,	22
Maryland.	
Baltimore,	20
Frederick,	22
North Carolina.	
Newbern,	26
New Hampshire.	
Walpole,	21
Virginia.	
Fairfax C. H.,	22
Lynchburg,	44
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Alabama.	
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Tennessee.	
Franklin,	20

In our next, if we find it will not occupy too much room, we may give a list of offices where we have 15 or more subscribers.

FOR SALE OR EXCHANGE.

I OFFER for sale my farm of 300 acres and upwards, near the village of Salem. It produces well either grain or grass. The buildings are all that are necessary, and together with the land itself, and fences, are all in good order. The garden is well stocked with small fruits and flowers. The situation is pleasant—the country healthy and beautiful. Price. $10,000. This property would be exchanged for real estate in any of the southern states—change of climate being desirable. JOHN SAVAGE.

Salem, Washington Co., N. Y., Feb. 1, 1846.—1t.* [2]

PRICES OF AGRICULTURAL PRODUCTS.

New-York, January 22, 1846.

COTTON—Upland and Florida,—inferior, 6½a6¾ cents—good middling, 7a7½—fine, 8¾a9. Mobile and New Orleans,—inferior, 6½a6¾—good middling, 7¼a7¾—fine, 10a10½.

CHEESE—Shipping, per lb., 6a8 c.

FLOUR—Genesee, $5.62½.

GRAIN—Corn, southern, 69c.

HEMP—Dew rotted, American, per ton, $100—Manilla $150.60.

HOPS—Western 25 cts. per lb.

HAMS—Pickled, 7 c. per lb.—smoked 9a9½ cts.

HAY—North River, per hundred, 96a97c.

LARD—8¼a8¾ per lb.

PORK—Prime old, per bbl., $10a$11.

BEEF—mess, per bbl., $8.75a$9.25.

TALLOW—7½a7¾ c.

WOOL—(Boston prices.) Jan. 21:

Prime or Saxony fleeces, washed per lb.	40a42 cts.
American full blood fleeces,	37a38 "
" three-fourths blood fleeces,	32a33 "
" half blood do	30a31 "
" one-fourth blood and common,	27a30 "

LIVE STOCK—Brighton Market—Monday, January 20, 1846.

At market, 375 Beef Cattle, 5 yokes Working Oxen, 26 Cows and Calves, 1250 sheep, and about 50 Swine.

Beef Cattle—sales of extra, $5.75; first quality, $5.25; 2d, do., $4.50; 3d do., $3.50a$4.00.

Working Oxen—Sales not noticed.

Cows and Calves—Dull. Sales were made at $18, $21, $26, and $29.50.

Sheep—Sales noticed at $1.75, $2.13, and $3.17.

Swine—Sales at wholesale at 4 and 5 c.; at retail from 5 for sows to 6a6½ for barrows.

PROSPECTUS OF THE SECOND SERIES

Of the American Journal of Science and Arts, to be conducted by PROF SILLIMAN, B. SILLIMAN, JR., *and* JAMES D. DANA, *at New-Haven, Conn.*

THIS Series will be commenced on the 1st of January, 1846, and will be published in six numbers annually, namely, in January, March, May, July, September, and November, of each year.

Each number will contain about 150 pages, making annually two volumes of 420 to 450 pages each, fully illustrated by engravings, as the subjects may require. *The price will be* FIVE DOLLARS *a year in advance.*

This Journal is intended to be a faithful record of American and Foreign Science. The "*Scientific Intelligence,*" will contain a summary of the progress of Physical Science at home and abroad. The aid of the most able collaborators has been secured in carrying out the plan, and we trust the "Journal" will commend itself to a large class of readers.

A greatly increased subscription, (over that which the First Series of 50 volumes could number, is required to sustain the expense of a more frequent issue and the reduction of price.

The most liberal discounts will be made to those who will act efficiently as agents in procuring new subscribers.

The NEW SERIES will afford a fresh starting point for those who have not been subscribers to the First Series, and the aid of all such is invited as a tribute to the cause of useful knowledge, and to the rising reputation of our country.

It is our design to make this Journal as popular and valuable as possible. The present system of reduced postage, will take it to any part of the continent for ten cents per number.

THE AMERICAN JOURNAL OF SCIENCE AND ARTS, first appeared in July, 1818. Forty-nine volumes have been published, and a fiftieth volume, to consist of a *General Index* of the entire series, is in the course of preparation, and will be printed as soon as possible. These fifty volumes, coeval with nearly a generation of men, cover a very important period in the history of science and the arts of this country and of the world, and must ever remain an important work of reference.

This work may be had of *Little & Brown*, *Otis & Broaders* and *Jordan & Co.*, Boston; of *C. S. Francis & Co.*, and *Wiley & Putnam*, New-York; *Carey & Hart*, Philadelphia; *N. Hickman*, Baltimore, *F. Taylor*, Washington, D. C.; *W. C. Little & Co.* Albany, &c.

Remittances and communications may be made by mail, addressed *to the Editors of the American Journal of Science, New-Haven, Connecticut.* [2]

THE IMPORTED HORSE CONSTERNATION

WILL serve a limited number of mares this season at his own stables at $20 each. It will be remembered that this horse was imported last June, and took the first premium at the State Fair. He boasts of an illustrious pedigree, is a beautiful brown, and has splendid action.

By Confederate, dam by Figaro, her dam by Waxy. Confederate was bred by Earl Fitzwilliam, got by Comus, by Cervantes, by Sir Peter, by High Flyer, by King Herod, by Flying Childers. Figaro, got by Hap Hazard, by Sir Peter, out of Miss Harvey, by Eclipse. See Stud Book.

The owners of fine mares will find it to their interest to have them sent early to the horse. Mares sent to foal will receive every attention, at the ordinary prices for keep. C. T. ALBOT.

Stokes, Oneida Co., Feb. 1—2t.* [2]

PATENT PREMIUM FAN-MILLS.

I. T. GRANT & Co., still continue to manufacture the celebrated Improved Patent Fan-Mills, at the old stand, Junction, Rens. Co., N. Y. These mills have taken the *first premium* at the following places:—New-York State Fair, at the Institute, New-York, the State Fair, at Pennsylvania, and the State Fair at Maryland. The subscribers have no hesitation in saying that these mills surpass anything of the kind ever offered in market. They are the only mill that has ever been produced that will chaff and screen wheat perfectly clean in one operation.

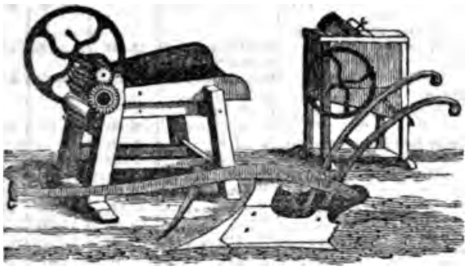
We also manufacture *Grain Cradles* of the very best quality, which have taken the first premium at the New-York State Fair. They are for sale at factory prices, at the following places:—

A. B. Allen's, 187 Water-st., New-York;
D. L. Clawson's, 191 " "
E. Comstock & Co.'s, Albany;
H. Warren's, Troy; and
Viall & Warren's, Mechanicsville, Saratoga Co., N. Y.

All orders thankfully received and punctually attended to. All goods delivered at Troy, N. Y., free of charge.

I. T. GRANT, &Co., Junction P. O., Rens. Co., N. Y

Feb. 1—tf [2]



PROUTY & MEARS, BOSTON,

CELEBRATED, highly approved, and unequalled CENTER DRAFT PREM.I'M PLOWS—for sale at their *sole agents'*,

JOHN MAYHER & Co.'s

Agricultural Warehouse, 195 Front-st., near Fulton, New-York.

The subscribers have just received a large assortment of Prouty & Mears's celebrated and highly improved CENTER DRAFT PLOWS, which are in every way *superior to all others now in use;* and having been appointed sole agents for the sale of the same in the city of New-York, we invite the public to call and examine for themselves, as the above plows cannot be obtained at any other establishment in the city. Dealers and others in the country supplied on the most reasonable terms.

We also wish to inform merchants and farmers that we have constantly for sale plows of our own manufacture, and all others now in use.

The following is a list of prices of some of the plows manufactured by us.

A No. 1.	Worcester	patent,		$1 50
A " 2,	"	"		2 00
A " 3,	"	"		2 50
2 B	"	"		3 50
2 B	"	"	with colter,	4 00
Eagle, No.1,	"	"		4 50
" "	"	"	with colter,	5 00
" " 2,	"	"		5 00
" " 2,	"	"	with colter,	5 50
Meadow C	"	"		5 50
"	"	"	with colter,	6 50

Castings to fit the Worcester Ploughs, 3½ cents per pound.

We likewise have for sale the most extensive assortment of *Agricultural Implements* ever offered in this city, most of which are new and highly improved patterns, warranted to be made of the best materials, and of very superior finish, among which are the following:

Pitts' Corn and Cob Crusher,
Hussey's " "
Sinclair's " "
Hussey's Reaping Machine,
Bark Mills, 4 sizes,
Coffee " "
Corn Shellers of all kinds,
Horse Powers " "
Threshing Machines "
Subsoil Plows, of the most approved kinds,
Cultivators of the most approved kinds,
Sinclair's Stalk and Straw Cutter,
Hovey's " " "
Stevens' " " "
Greene's " " "
I. T. Grant & Co.'s Prem. Fan Mills,
Clinton's Prem. Fan-Mills,
Rice's " "
Holmes' " "
Stone Trucks, Wheelbarrows,
Mule Waggons, &c.. &c.,

Langdon's much approved Cultivator Plows or Horse Hoe. All kinds of plow castings constantly on hand. All the above articles are offered for sale on the most reasonable terms. Castings of all kinds made to order.

JOHN MAYHER & Co.,
195 Front-st., N. Y.

N. B. *Beware of Imposition.* Any person offering plows for sale, and representing them to be of our manufacturing without the full name "J MAYHER & Co.," on the mouldboard and beam of the plows, are guilty of a *false representation*, as no person in the city and county of New-York has the genuine article for sale but ourselves. Feb. 1—[2] J. M. & Co.

BLACK SEA WHEAT.

THIS wheat has become justly celebrated in northern New-York, and also in Vermont and Canada, having succeeeded admirably during the last ten years. It has not been found liable to rust, and the yield has in many cases much exceeded that of winter wheat. Orders for seed of this and also the Italian wheat, can be filled at the Albany Ag. Warehouse and Seed Store, 2 Dean-st. E. COMSTOCK & Co.

Feb. 1, 1846. [2]

LINNÆAN BOTANIC GARDEN AND NURSERY,

Late of WILLIAM PRINCE, deceased, Flushing, L. I., near New-York.

THE new proprietors of this ancient and celebrated *Nursery*, known as *Prince's*, and exclusively designated by the above title for nearly fifty years, offers for sale a more extensive variety of FRUIT AND ORNAMENTAL TREES, SHRUBS, VINES, PLANTS, &c., than can be found in any other nursery in the United States, and the *genuineness* of which may be depended upon; and they will unremittingly endeavor to merit the *confidence* and *patronage* of the public, by *integrity* and *liberality* in dealing, and *moderation* in charges.

Descriptive Catalogues, with directions for planting and culture, furnished *gratis*, on *post-paid* application, and orders promptly executed. WINTER & Co., Proprietors.

Flushing, L. I., Feb. 1, 1846.—2t*[2]

POUDRETTE.

THE Lodi Manufacturing Company have on hand freshly manufactured poudrette, of the first quality, for sale in the city of New-York, at the following prices, viz:

From one to six barrels, inclusive,	$2.00	per barrel.
" seven and upwards,	" 1.75	"

delivered in New-York, free of cartage and other expense.

At the factory, on the Hackensack river, where vessels drawin eight feet of water may go, at the rate of $1.63 a barrel, or 3 cents per bushel.

This manure is not only the cheapest and best in use, but als is less dangerous to use than some others. Two barrels or eigh bushels will manure an acre of corn. Instructions sent grati with pamphlet when required. Letters (post-paid) addressed t the Lodi Manufacturing Co., 51 Liberty-st., New-York, enclosin the money, will be immediately attended to, or it may be obtaine by application at the office of the company. Feb. 1—4t [2]

CHEAP PLOWS AND PLOW CASTINGS FOR TH SOUTHERN TRADE.

THE subscriber has just completed arrangements which enabl him to sell the following *well known plows at considerably les prices than can usually be found*, viz:

The No. 10½ plows, complete.
" 11½ " "
" 12½ " "
" 21 " "
Corn " "
Seed " "
and J. M. & Co.'s—Minor & Dutcher's "

Also the castings for all these different plows—and the skeleton i. e., all the iron-work alone, without being stocked.

The particular attention of southern dealers is invited, and call from purchasers is solicited, who will ascertain the truth of th above statement.

Orders accompanied with remittance, or satisfactory paper o reference will be promptly attended to.

N. B A general assortment of agricultural machines and im plements for sale. Horse-Powers, Threshers, Burr-Stone Portable Mills, Corn and Cob Crushers, Corn-Shellers, Straw-Cutter &c., &c. J. PLANT, No. 5 Burling Slip, N. Y. City.

Feb. 1, 1846.—1t [2]

FIELD, GARDEN AND GRASS SEEDS.

THE Albany Agricultural Warehouse and Seed Store, No. 2 Dean-st., is now furnished with a full stock of Seeds fo spring use, embracing it is confidently believed, nearly all articles wanted by farmers. Among our field seeds may be found

Black Sea Wheat,
Italian Spring Wheat,
Marrowfat and other Peas,
Barley, two and four rowed,
Emir or Skinless Barley,
Seed Corn, various kinds,
Beans, several sorts,
Orange and White Carrot,
Ruta Baga and other Turnips,
Sugar Beet and Mangel Wurzul, &c., &c

GRASS SEEDS, such as

Large Red Clover
Medium do. do.
Timothy,
Red Top,
Orchard Grass,
White Clover,
Lucerne or French Clover,

GARDEN SEEDS:

Of every variety and in all sized packages, and in boxes suitable for retailing by country merchants. The attention of market gardeners is particularly called to our assortment. Our seeds are with three or four exceptions, of the growth of 1845.

A liberal discount to merchants and seedsmen.

Feb. 1 E. COMSTOCK

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

GEDDES' HARROW.

ARRANGEMENTS have been made for a constant supply of these useful and superior Harrows, so that we can hereafter receive orders for them at the same prices they are sold for by the manufacturer. They will be well made, both as to durability and finish, and are considered a very superior article. The State Ag. Society awarded a silver medal for the invention. For an engraving, and full description, from the pen of Mr. Geddes, see Cultivator, 1844, p. 16 A sample may be seen any time at our Ag. Warehouse, 23 Dean-st. Albany, where a full supply will also soon be received. E. COMSTOCK & Co.

FARM FOR SALE.

THE subscriber offers for sale the farm upon which he now resides, situate in the village of Auburn, in the county of Cayuga, and containing 100½ acres.

This farm lies upon the south side of Genesee-st., (Auburn,) and is well known as having been the residence of Hon. Nathaniel Garrow, deceased, for many years.

The buildings, fences, and other erections thereon, are ample, and in good repair. The soil will vie with that of any other in western New-York, for fertility, variety, and earliness of vegetation. Great attention has been paid to the selection and cultivation of choice fruits, and there is now upon the farm in full bearing, the choicest varieties of apples, pears, cherries, peaches, plums, grapes, &c., in great abundance.

The farm is well watered by durable springs.

The location is a most desirable one, it being within a few minutes walk of the business part of the village—the churches, post-office, and railroad depot. The Female Seminary is also within a few rods of the dwelling house.

A credit will be given, if desired, for a large portion of the purchase money for a term of years, upon payment of interest annually. Possession given in the spring if required. Enquiries may be made of the subscriber upon the premises, of Luther Tucker, Esq., Editor Cultivator, Albany, or of David Wright, Esq., Auburn. JOHN REMER.

Auburn, Feb. 1, 1846—4t

GREAT ASSORTMENT OF PLOWS.

THE proprietors of the Albany Agricultural Warehouse are now offering to the farmers of this and other states, what they consider the best assortment of Plows ever submitted to the inspection of the public in one collection. That our customers may have an opportunity of judging for themselves we will enumerate a portion of them as follows, with prices annexed.

••••••

WORCESTER PLOWS, made by Ruggles, Nourse & Mason

DESCRIPTION.	Number.	Plain.	Wheel or Cutter.	W. & Cutter
Two horse light plow,....	Eagle No. 1..	$8.00	$9.50	$11 00
" " break up "	" " 2..	8.50	10.00	11 50
" " " "	" coulter, ..	10.00	11.50	13 00
" " " "	Sward C,.....	9.00	10.50	12 00
Three " " "	" B, ...	10.00	11.50	13 00
" " " "	" D, ...	10.50	12.00	13 50
" " " "	Eagle No. 4,..	10.00	11.50	13 00
" " " "	" " 25,..	10.50	12.00	13 50
Small One Horse Plows.				
Cotton or rice plow,.....	Six inch, ...	3.50		
" " "	Seven "	4.00		
Furrowing "	Double Mold,.	4.00		
Garden "	A No. 1, ...	3.50		
One horse or Corn, do....	A " 2, ...	4.50		
" " " "	A " 3, ...	6.00		
One or two horse Seed do.	No. 1 B,......	6.50		
" " " " "	" 2 B,......	7.50		
Side-Hill plow, ...	" O, ...	5.00		
" " "	" A 1,......	9.00	10.50	12 00
" " "	" A 2,......	11.00	12.50	14 00
" " "	" A 3,.....	13.00	14.50	
Subsoil "	" O....	5.00		
" "	" 1,........	8.50		
" "	" 2,........	13.50		

CENTRE DRAFT PLOWS, made by D. Prouty & Co., Boston.

SIZE OF PLOW.	Number.	Plain	Cutter.	Cut. & Wheel
Two or three horse Plow,	Eagle C, ...	$9 50	$9 50	$11 00
Three or four " "	" B, ...	9 50	10 50	12 00
Two " "	No. 22,.......	7 50	8 50	10 00
Two " "	" 23,.......	8 00	9 00	10 50
Two or three " "	" 24, ...	8 50	9 50	11 00
Three or four " "	" 26,.......	10 00	11 00	12 50
Self-Sharpening.				
One horse plow,........	No. 1.........	5 50		
One or two horse plows,	" 2½,.......	6 50		
Two or three " "	" P V,......	8 50	9 50	11 00
" " " "	" 5½,.......	9 50	10 50	12 00
Four " "	" 6, ...	10 00	11 00	12 50
Side-Hill.				
Two horse plow,........	No. 1,........	9 00	10 00	11 50
Two or three horse plow,	" 2,........	10 00	11 00	12 50
Three or four " "	" 3.	11 00	12 00	13 50

SUBSOIL PLOWS. No. 1, $8.00—No. 2, $10.00—No. 3, $12.00.

Many other sizes of these plows can be furnished if wanted

BRAINARD, COMSTOCK, & Co.'s PLOWS.

"Diamond," No. 5. Plain, $8.00—Clevice, $9.00—Wheel or Coulter, $10.50—Wheel and Coulter, $12.00.

"Diamond," No. 4. Plain, $8.00—Clevice, $8.00—Wheel or Cutter, 10.50—Wheel and Cutter, $12.00.

"Telegraph," for stubble or crossing. Plain, $7.00—Clevice, $8.00—Wheel or Cutter, $9.50—Wheel and Cutter, $11.00.

Burrall's shell wheel plows, and Barnaby & Mooer's side-hill and level land plows will also be kept on hand.

N. B. One extra point with each plow.

Feb. 1. E. COMSTOCK & Co., 23 Dean-st.

HUSSEY'S REAPING MACHINES.

WILL be delivered in Baltimore, Md., and Auburn, N. Y., at 100 dollars. They will be made of the best materials, and will embrace all the late improvements. The public prints abound with its recommendations—*all* of which the reaper is warranted by the subscriber to fulfil.

Hussey's Corn and Cob Crusher, lately improved, is warranted by the subscriber to excel on thorough trial, any in use. Price from 25 to 35 dollars. In ordering the above machines, please address the subscriber in Baltimore. OBED HUSSEY.

Baltimore, Dec. 1—4t*

GUANO.

RECENTLY received direct from Ichaboe, per Shakspeare. The various experiments made from this cargo has proved its quality equal, if not superior to any other Guano Great care has been taken to put it in tight casks, that it may be kept any time without losing the ammonia. For sale in lots to suit purchasers, by

EDWD. K. COLLINS & Co.,
56 South-street, New-York.

Dec. 1.—tf

THE CULTIVATOR.

NEW “TO IMPROVE THE SOIL AND THE MIND.” SERIES.

VOL. III. ALBANY, MARCH, 1846 No. 3.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

OFFICE IN NEW-YORK CITY, AT

M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,

where single numbers, or complete sets of the back volumes, can always be obtained.

☞ "The Cultivator" is subject to newspaper postage only. ☜

LETTERS FROM MR. HORSFORD.—No. IX.

••••••

FELLENBERG SCHOOL AT HOFWYL.

Giessen, Oct. 17th, 1835.

MR. TUCKER—I have just returned from an excursion in Southern Germany, Switzerland, and Sardinia.

My course lay along the valley of the Rhine through the Grand Duchy of Baden to Freiburg; thence across the Black Forest to Schaffhausen, where the waters of the Rhine pour over a ledge of rocks, furnishing the largest water-fall in Europe—thence to Zurich, where Pestolozzi was born; thence by Koppel, where Zuingli, the companion of the reformers fought and fell,—and through Zug and Goldau, upon the Riga,—an isolated mountain peak of six thousand feet, commanding a magnificent view of the Alps, in the distance, on one side, and the Jura on the other, with all the lakes and richly cultivated lands between; thence to Lucerne, the theatre of the recent ill-starred revolution; thence along the Vierwaldstaeder lake, through the scenes of Tell's history, to Altorf; thence along the St. Gothard's road to the Italian summit; thence, by foot-paths, through snow, and over the glaciers, to the sources of the Aar, where Agassiz, Desor, and their associates have for ten years been recording the history of that river of ice, the Aar glacier; thence through all the remarkable passes of the Bernese Alps to Interlacken; thence over the Gemmi to the valley of the Rhone, and along the Simplon road to Martigny, where Longfellow's Excelsior sets out; thence over the Col de Balme, to Chamouni, from which rises Mont Blanc; thence to Geneva; thence through French Switzerland, by Lausanne, Fribourg, Berne, Hofwyl, Solothurn, Aurau, Zurich again, St. Gallan to Constance, where Huss was burned; thence over Schaffhausen, through the Black forest, crossing the sources of the Danube to Stutgart, the capital of Wurtemburg; thence, after visiting Hohenheim, [as described in the letter published in our last—ED.] near Stutgart, over Heilbroom, down the Necker to Heidelberg, and along the Bergstrassa to Darmstadt, Frankfort and Giessen—in all a tour of nearly fifteen hundred miles.

After this enumeration of the principal points visited in my tour, I need scarcely add that opportunity has been presented me for learning much of agriculture and affiliated pursuits, in greatly diversified situations, soils, and climate. Some of the observations I have been enabled to make, may perhaps be worth, hereafter, sharing with your readers.

The most prominent objects of my tour, however, were the institutions for education in Southern Germany and Switzerland. Of these I visited eleven, eight of which were more or less schools for instruction in the science and practice of agriculture. In all of them, the announcement that I was an American, and the object of my wishes, secured me the kindest reception and the most generous co-operation. Two or three days were devoted to each of several of them, in learning their systems and distinguishing peculiarities. Of what I saw and heard, I have taken somewhat ample notes, and begging for them the consideration they deserve from having necessarily been written in great haste, I will give you a copy of my notes at Hofwyl; prefacing them with a brief notice of M. Fellenberg, and the origin of his school.

Emanuel von Fellenberg was descended from one of the oldest families of the nobility of Switzerland. Early dissatisfied with political life, he became a pupil of Pestolozzi. Inspired with the ideas of that great man, he resolved to devote his life and fortune to their development. Superior to his master in the refinements of life and in wealth, he was scarcely second to him in zeal and firmness of purpose.

He consumed ten years in visiting schools and otherwise fitting himself for the execution of his plans. Having sought through Switzerland a location uniting all the essentials to his conception of a site for a school, he fixed upon Hofwyl, an estate in Canton Berne, about five miles from the capital. It is a large irregular mound, embracing about two hundred acres. In the distance, on the east, are the Bernese Alps. On the west is the Jura chain. Lesser elevations, between, crowned with forests of different ages, meadows rich in verdure, grain fields, and cottages embosomed in shade trees, greet the eye on every side as one looks out from the grounds upon which the group of buildings is situated.

The school was commenced with poor children, whose education not only, but whose food and clothing were provided. I cannot follow the history in its detail, showing how unwilling for a long time the humbler classes were to receive education as a gift—how from these little beginnings the institution has gone forward, till it now numbers some twenty-five professors and teachers, with pupils from every quarter of Europe—how M. Fellenberg was condemned for his enthusiasm—how his holy purpose to temper the keenness, and lessen the pressure of want, stood, like the granite peaks in his land,—all unchanged, amid the shock of elements around—and how, full of years and of happiness, he has just closed his mission.

I must turn to my notes. There were three schools founded by M. Fellenberg—two at Hofwyl, and a third at Kutti, another estate near. The latter is the school for agriculture. The higher school at Hofwyl, receives pupils from the more wealthy families, of whom there are about forty from England—the lower is for the poor. The courses of instruction are totally different.

The English Professor was kind enough to present my name and mention my wishes to M. F. early in the morning after my arrival.

Sept. 29, at ten o'clock, I announced myself at M. F.'s office. He begged to be excused for a few moments that he might complete a letter in progress. I walked up and down a little park or play-ground, looking out upon the grounds of the estate, and enjoying the dress now gradually being taken on by the forests—the yellow and red, with all intermediate shades between them and green in such harmony and depth of coloring.

Connected with the school are eight or ten buildings, all of them large, conrtructed in a kind of Swiss style. The roofs are pointed and projecting, and from two of these, towers or spires run up, giving a singular and not unpleasant expression to the whole. Northward, at the distance of half a mile, and some fifty feet lower, are two small lakes. Beyond, on the right, a high range of wood-land, dotted with farm-houses, orchards, groves, and in all directions, grass and grain fields, showing a soil of thorough cultivation, and a high degree of fertility.

At the close of a half-hour M. F. joined me. He is about five feet eleven in height, large and fleshy. His eyes and complexion dark—his forehead far encroached upon by the hair from above. The features are rather heavy, though the countenance beams with earnestness, benevolence, and intelligence. His movements are rapid —in a word, his bearing throughout, is that of a thorough-bred gentleman, upon a ground-work of well-balanced mind and christian principle.

He had been made acquainted with my purposes by the English acquaintance of last evening, and took me, without proposition, at once away upon a walk of a mile and three quarters, to the Agricultural school. On our way, he occupied my time with the subject of education, his father's peculiarities, Pestolozzi's great ideas, and all matters relating thereto, in a style of great clearness and simplicity, and with all the sincerity of expression that might be expected from an honest man, who knew the truth of what he was stating, and felt its importance. He does not pursue precisely the course of his father in instruction, because, he says,—"I have not precisely the same constitution of mind; yet I arrive at the same result, tho' following another plan."

At length we came upon the farm-grounds, in the midst of which are erected two enormous stone edifices; one appropriated to the purposes of a barn, and consisting of mows, granaries, stalls for cattle, horses, swine, &c., and the other a boarding-house or farm-house with study-rooms, work-shops, store-rooms, and apartments for all purposes that could be connected with the domestic economy of the farm. Before us were the young men from sixteen to eighteen years of age, digging potatoes. They numbered eleven,—three of the whole number were absent, or employed upon other duty. Many of them were bare-headed, and all of them in the peasant's *kittel*, (blue over-frock,) The potatoes were assorted as dug—the lesser from the larger, and the sound from the decaying. The little crop had been planted, hoed, and now harvested, throughout, by the scholars. In these labors, and in all the others of the farm, carried forward almost exclusively by the pupils there is no play-work. M. F. intends they shall have a deep-seated conviction of what perspiration and fatigue are, and of how much ought to be expected from a day-laborer. Leaving them, we went to the meadow where they had been mowing—and to the garden where each had a little sub-division for himself, devoted to growing what he pleased. The larger kitchen garden was appropriated to cabbages, cauliflower, beets, turneps, &c.

The barn being situated upon an inclination, was entered by wagons upon a bridge above, and the hay and grain discharged with little labor into the mows and bays below. On the first floor were the stalls; one series for calves, (fine-looking creatures,) another or two others for cows,—all spotted, well-bred cattle, not large, but finely formed, in good condition, sleek, and good milkers—another series for swine, in which I recognized some Berkshires. The stalls were paved with small cobble stones, and so inclined that the urine could be conducted to a reservoir without. Each cow was secured before a little trough and rack above, by a chain. No partitions of any description between them. On the same floor were broad apartments, for threshing, drying potatoes and beets, beside all the usual conveniences of a stock and grain barn.

In the cellar which extends under a large portion of the barn, I was shown a quantity of potatoes, some two thousand bushels I should judge, which were all threatened with destruction from the almost every where prevailing potato sickness. All were ordered to be taken up again and dried. At my suggestion we took some specimens of the diseased roots to be examined with the microscope; but its power was too feeble to reveal anything satisfactory. The theories of this fearful malady, seem none of them suited to all the facts of the case. It has fallen upon the plant in dry soils and wet—and in other soils equally dry and wet it has not appeared. It has occurred in the shade, and again has left such a location unvisited. Soils highly manured have escaped, and have not escaped. It is not in Switzerland alone, nor in Germany—but in France and Austria, and England, and in America. Not this year only, but in previous years. To particular soils, degrees of moisture, exposure to sun, peculiar situations, or presence of unusual quantities of manure—to each and all it cannot be attributed. But I have almost forgotten Kutti and the farm-school.

From the barn we went to a room in the farm-house, where the register is kept. This apartment is furnished with a double row of inclined desks, back to back—all in a single frame-work, a few chairs, some shelves, and a board for some forty keys. Here the scholars write in their day-books all that has been accomplished, and all they have learned during the day, between 7 and 9 o'clock in the evening. M. F. showed me the day-book, journal, and inventory of the farm. The detail seemed almost immeasurable, but the system is so perfect that there is nothing like confusion in any of the accounts, or like difficulty in learning from them the exact condition of outlay and income. The milk-book, for example, had a record of all the cows' names, their ages, the amount and what kinds of food they eat, and the average amount of milk given daily, determined by admeasurement at the close of each month; the amount sold, the amount fed to calves, the butter and cheese made, amount consumed, and quantity sold, &c. The day-book contained a record of each day's work, with what, and by whom. The other books, and there were several, were not less interesting, or the system of record less perfect. All purchases, outlays, productions, and losses, were displayed in the inventory sheet, and the absolute condition of the establishment shown by the balancing.

After inspecting these things we went to dine. A spacious hall with high ceilings, lighted on three sides, contains a table, chair, and a sliding cupboard, communicating with the kitchen below. Instead of a single cupboard carried up by cords and weights, this is double, one ascending and the other descending, the movement being effected by a cog wheel revolving in a chain connected at the extremes with the cupboards. A simple sentence of prayer for blessing upon the repast, and we were seated, M. F. at the head. The young gentlemen served the soup, rich boiled beef, cabbage, potatoes and bread, which constituted the whole dinner. At its close there was half an hour of relaxation; then all the young gentlemen assembled in the drawing-room to receive an hour's instruction from their noble teacher. They were seated about two long tables, with their note-books, and in the apparel in which the potatoes had been dug.

It seems that the little republic of pupils had by an election of their own, appointed individuals of their number to the charge of each particular department of the matters to be cared for about the farm. One to the cow stables, one to the working cattle, another to the swine, another to the horses, another to the fruit, another to the rooms of study—the sleeping apartments—each a specific trust. One was elected to be leader in all kinds of work. Each had been required to [illegible] a scheme for conducting his own department of supervision. These schemes were successively called for, read and discussed; and here it was, I felt the real greatness of M. F. He elicited the warm but honest discussion of all the little points to be considered in these schemes, and found means to introduce a plain, easily to be comprehended, but deep and sound lecture upon the political economy, if I may so call it, of an agricultural community.

The first scheme was that of the leader in all work. It was well drawn up for a lad. Each article was read and discussed, or assented to without inquiry, as it seemed to impress the infant council. One topic I recollect particularly. "Should each member of a party engaged in the same labor, judge of the excellence of the mode employed? and should he express his judgment? and if so, before the work was commenced, while going forward, or when concluded?" At first there was a little reserve; then came a variety of opinions. All thought that each should exercise his faculties to discover the best mode. Some thought that if a different mode would be better it should be made known before the work was commenced, as after its conclusion the discovery would be of little service. Others, again, that after its commencement, one would be better able to judge of the relative excellence of the employed and proposed plans, and that the time for expressing an opinion would be in the progress of the labor. Others still had different views, all of which showed that they have learned to *think*. The various opinions gave M. F. an opportunity to present the prominent features of a republican government—the necessity of obedience to some head, and confidence therein—the duty of investigation, and the proper time, as men and as gentlemen, for the expression of differing opinions when deliberately formed. His extempore alternate inquiry, reply, and dissertation, was one of the finest exhibitions of what a teacher may attain, I have ever known.

Each officer in the republic holds his place fourteen days, and each has the strong stimulus of M. Fellenberg's approbation, of personal review, and of the consciousness that he will be succeeded by one whose highest wish will be to excel his predecessor, to make him perform his service faithfully.

At the close of this exercise, which continued about an hour and a half, a storm had set in, and the labor out of doors could not be resumed. The study was continued. A book of agricultural problems was taken down, and several estimates for the consumption of fodder, fattening of cattle, &c., made. At length a problem to determine the number of cows they should be able to winter, feeding them so many pounds of roots, so much hay, and so much clover, per day. Last of all, how much land they would be obliged to devote for the whole coming year, in order to the requisite supply of grass, hay, potatoes, beets, &c., necessary to the *maintenance* of the stock, i. e., keeping in their present flesh, and how much more to furnish them with all they can eat—allowing each cow to weigh eight hundred pounds, so much hay, clover, and roots being given, according to established data, and so much produce from an acre—being taken as the result of experiment. All went to work, and in about fifteen minutes the problem was solved. M. F. was with them, seeing that the operations were correctly performed, and taking all measurable interest in their work. There was certainly nothing very profound in the question as a mathematical task, but it was eminently practical, and has moreover one of the essentials to progress and success in agriculture, viz., *quantity*.

The rain continuing, the whole party went to another room, and remained two hours in cutting and coring apples to be dried. During this time, I visited the sleeping rooms where each has a bed for himself—as is the case every where, so far as I have observed, on the continent—the room for drying seeds, the workshops, and a variety of other rooms, and finally terminating in the apartment where all the scholars, with M. F., were seated on benches, working at the apples. He had employed the time in such conversation as was adapted to fit them for the duties of men, discussing the little points of what I have called political economy of agriculture, for want of a better name. For this he is eminently fitted, for, as one of the early poets says of his hero, "he has seen much of cities and of men." In a few moments we left.

While awaiting the solution of the fodder problem, I copied the following study plan for the summer term: 5—6, breakfast; 6—11, work; 11—12, study, (chemistry, mathematics, botany, and book-keeping alternating with each other;) 12—1, dinner; 1—2, free hour, drawing, &c.; 2—5, work; 5—6, chars; 6—7, supper; 7—8, singing and garden work, alternately; 8—9, writing out notes and day-book; 9 gathering in assembly-room, and retiring.

Sunday—5—6, breakfast; 6—10, free-time; drawing, sketching, and models; 10—1, church at Hofwyl; 2—6, excursion visit to peasant farmers, recreation.

The whole labor, and each and every kind of labor, is gone through with by the scholars. M. F. quoted Napoleon's maxim—that every soldier had a maréchal's commission in his pocket. So, I suppose, as they needed but the necessary experience and effort to win the epaulettes and command, each one of the pupils may attain to the most profitable farm direction, if he comes through the course of plowing, hoeing, harvesting, and all the toil of his calling to this position.

The grounds are plowed, the seed sown and harrowed in, the harvest gathered, and threshed with their own hands. Their day-books show how much horse-labor, man-labor, seed, and manure, have been given to each crop. They also show how much grain has been harvested, and sold, and a rainy day will enable them, yet to bring the several quantities in the relations of investment, income, and profit or loss.

The milking of the cow is performed by the scholars in succession, each serving fourteen days. All the charge of the stock is entirely given up to them, and M. F. assured me there is awakened that regard for the domestic animals which is so essential to their good preservation, and which, while it makes the scholars feel that they are confided in, relieves the day-laborer from an important responsibility. There is indeed on this beautiful and highly cultivated farm of more than two hundred acres, only a director, and at times a few day-laborers, the labor being nearly all performed by the pupils.

The agricultural employment—in other words, the labor—is made delightful, partly, I think, by there being just enough of it, but chiefly by the botany, physics, chemistry, mathematics, and drawing, with which it is all made in a measure scientific.

On our return, M. F. expressed his intention to teach, or have so much of chemistry taught, as would enable his pupils to analyze soils, manures,, and ashes. This he will have done in winter, when the number of study hours will, in proportion, be greatly increased, and when all the pupils will return to Hofwyl. He would have them, hereafter, occupy the leisure of their winters with little laboratory investigations. He seems to think the result not of difficult attainment.

Parting with my noble acquaintance, at the higher school-house, I received two volumes on Agricultural Education, one by himself, directed to the Landswirthschaftverein of Prussia, and the other by a pupil of his father, now at the head, M. F. assures me, of the best school of this kind in his acquaintance, situated in canton Appenzill. I gave him three numbers of the Cultivator, and we parted to meet to-morrow morning.

Note.—The succeeding day was given to studying the school for the poor children, and to learning something of the farm and its management. Persuaded as I am that a plain account of what I there saw and heard, will be not without its interest, I will, after translating a portion of the prospectus for the Kutti school, resume my notes.

Prospectus of the Farm School upon the Fellenberg estate, Kutti, near Hofwyl.

A—INSTRUCTION.

Practice is the principal object. It is divided into

1. *Field-work*: The pupils will execute farm-work. Beside this, they will have as lighter work, the forest culture, and designing, and ornamenting pleasure grounds.

As soon, and as much as possible, the leader of all work will be chosen from the pupils by their own number.

2. *Employment in house, yard, stall, barn, granary, dairy*, and *cellar*. Each pupil will have for a certain period, a particular charge allotted to him.

3. In similar manner the work of the forest culture will be arranged.

4. Constant communication from the teacher, based upon what is daily seen and done, will constitute the chief instruction to the pupils, and furnish occasion for introducing the theory and auxiliary sciences.

5. A complete system of book-keeping, including single and double entry is required from every pupil. For this purpose, they, under the direction of a teacher, will keep a day-book, journal, and ledger, accompanied throughout with calculation.

The theory of Agriculture, and most of the auxiliary sciences will be systematically taught in the winter.

Exercises in devotion, partly entrusted to the clergymen of the different confessions at Hofwyl, will be sustained throughout the entire year.

The auxiliary sciences which will be taught, are

1. *Natural Sciences.*

a. Economical mineralogy, botany, and zoology. farriery and horse-shoeing will connect themselves with the latter.

b. Physics (natural philosophy,) and chemistry, united as chemical philosophy, with particular reference to meteorology, agronomy, and technical chemistry.

2. Mathematics.

a. Calculation connected with agriculture.

b. Surveying and levelling.

3. Machine drawing—plan and perspective.

4. Agricultural architecture.

c. Mechanics applied to agriculture.

5. Economical commercial arts—(the art rightly to speculute.)

6. Instruction in singing. In music, to such as are especially qualified.

7. Aid in reading, writing, &c.

For the development of the body, in every relation care will be given.

It will consist theoretically in instruction in what

a. Health consists, and in its preservation.

Practically,

b. Agricultural and and economical manufacture work of every kind.

c. Exercise with foils.

The aid which the Institution offer, beside the cultivable grounds, in woodlands, peat-bogs, work-shops, (particularly wagon and smith shops,) brick-kilns, the nearness of Hofwyl, and of larger and lesser peasant farms, furnishing great facilities for observation; the chemical laboratory, the apparatus in physics, the collections in natural history, the rich Flora of the vicinity, the nursery, the fields for experiment, the technical manufactory, &c., are well adapted to afford to the instruction strong support.

The instruction is so divided that in winter more attention will be given to theory, and in summer, more to practice. Still an entire separation of the one from the other is impossible.

In summer those auxiliary sciences will be pursued which permit excursions—*e. g.*, botany, surveying and levelling.

B.

The uniform suit, consisting of a *kittel*, (blue frock and belt,) and cap, will be furnished.

C.

The pupils should be confirmed, and be sixteen years of age. He must have the usual knowledge of reading, writing, and arithmetic, be of good moral character, without organic defect, and in the possession of souud health.

D.

The period for the complete course in agriculture and the auxiliary sciences, is fixed at three years. (This will not prevent pupils being taken for a less period.) Admission will be best in spring, because the practical employment of the summer will be the best introduction to the study of the theory in winter. Pupils will notwithstanding be received in autumn.

	Charge for Swiss.	For Germans.	For all other foreigners.
First year,	$212	$240	$336
Second "	106	160	224

For the third year nothing will be taken in return. But on the coutrary, from the second forward, the labor according to the current price, will be paid.

Beside this, in the first year, pupils will receive premiums for industry, with which, also, neatness and bearing will be especially taken into consideration.

Each year a thorough and complete examination in relation to both theory and practice, will taken place, which will be made known through the public papers.

Brothers von Fellenberg.

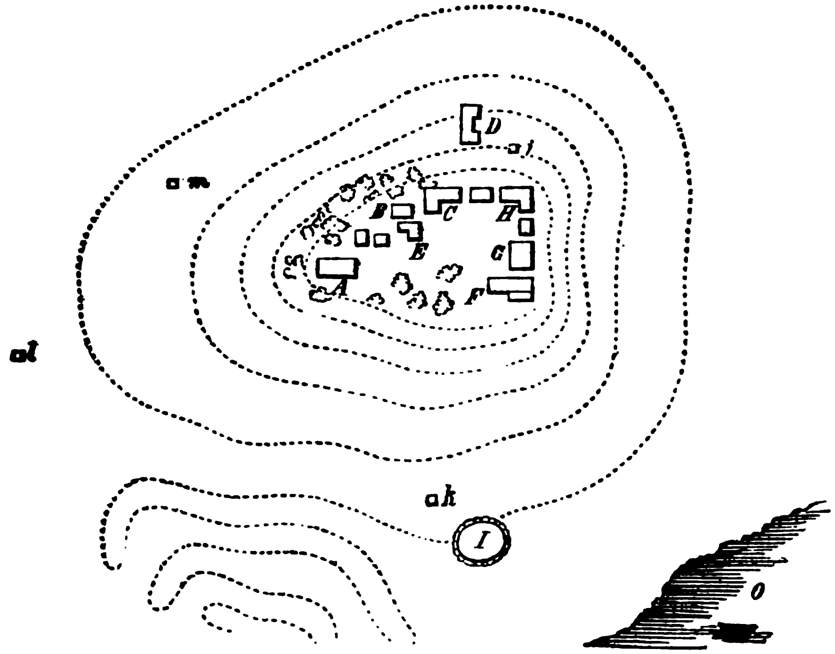
Oct. 1.—At ten o'clock I found M. Fellenberg in his office, ready to further my wishes. The apartment, like all the others of thé edifice, is high. Surmounting the earthen stove and a few other indifferent pedestals, were busts of great men. Among them, gifted with the insignia of genius and philanthropy, in a degree altogether superior, was the bust of the father Fellenberg. Around the wall were portraits of varied character—landscapes, scenes illustrative of Swiss domestic life, &c. Upon tables and shelves were vast numbers of pamphlets, books, plans of different kinds, and general office paraphernalia. At the end of a sofa was the correspondence of the last day or two. No sooner was I seated, than my host, true to a knowledge of my wish and object, resumed the explanation of the peculiarities of these schools.

Least in rank among them is the school for training day-laborers, in the field. The pupils are from the poor families in the vicinity, and I think from those of day-laborers. Their parents are not land-owners—they rent from a peasant a house and garden, and work for the landlord in payment. The children in many instances seem born to poverty. This debt to the state M. F. would prevent, by qualifying the sons to earn more than their fathers earned before them, and fitting them to be more or less useful citizens. Pestalozzi's grand conception was, that *labor which seems ordinarily only for the development of the body, and its maintainance in health, may be made the medium of mental and moral training*. This idea lies at the foundation of thirty schools for the poor, now sustained by benevolent associations in different parts of Switzerland. They are educated free of cost not only, but supplied with everything except clothes, and I think even these, are in part the gift of their noble father.

After listening to M. F.'s account of their arrangement, we walked out to look through the several establishments at Hofwyl. First we passed a carpenter's shop, where some work was going forward apparently connected with the school edifices. Then we came to the school and boarding-house for the poor boys. In one room, two were preparing potatoes for themselves and their fellows. In another, six or seven really wretched-looking children were assorting peas, while another, older, had a book, which I fancied he had been reading to his companions. It was exceedingly grateful to observe the friendly address of M. F. to these little fellows, some of whom seem scarcely worth the time and effort necessary to a tolerable education. But there is "not a sparrow falleth," &c. The study-room was large, supplied with benches, tables, and a black board. The sleeping-room had for each a little bed.

The lads are employed during the day with hoeing, digging, gathering, assorting, and other farm-labor, under the constant supervision of a teacher. The cabbages, potatoes, beets, turneps, and the products of the boys' labor, are sold, and bread is purchased with the proceeds. How much time they devote daily to study I did not learn. Just uow the gathering of the fall crops must necessarily consume nearly the whole time, but in winter, I presume, five or six hours. They are taught to make mats, baskets, and a variety of other articles in household use.

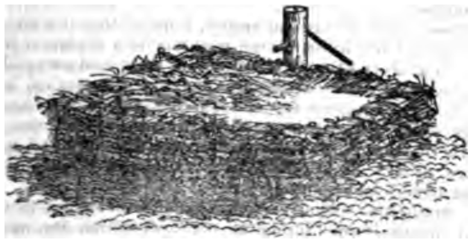
In carrying out this plan for educating poor children gratis, the conservative world about, regarded M. F. as enthusiastic almost to insanity, and thus for a long time withheld their co-operation. It was something their fathers had not done! Switzerland is not peculiar



Fellenberg Institution, Hofwyl.—(Fig. 22.)

in this reverence for antiquity. There are other places and communities, where modes are, necessarily, the best, because hallowed with the confidence of centuries. Enthusiasm, except in whale-fishery and war, is a dangerous element in the human constitution—especially so in science and religion. It was evidently added by mistake.

Continuing our way, we entered the cow-stables. Here were about eighty—as fine a collection taken together, as I have seen on the continent—all pied, all in milk—standing upon a floor of cobble-stone, overspread with straw. One among them of great excellence, was worth, M. F. said, about ninety dollars. She seemed capable of giving a large supply of milk—was rather an Ayrshire in proportion, though nearly as large as a Hereford. The manure is easily gathered by folding the litter and excrements within the straw bed of each day and depositing this upon the pile without, (fig. 21.) Here it remains till thoroughly rotted. Tho' by being kept continually wet, it is not permitted to ferment. Most of the cows suffer from the unnatural growth of the hoof. M. F. attributes it to the action of saltpetre formed in the soil below. Need it be any thing more than the legitimate result of this unnatural quiet of the limbs? The growth of the beard when neglected, or of the finger-nails of the Fakeers of Hindostan, (till the latter as little resemble the usual product of healthy secretion, as they do the talons of birds of prey,) are but parallel instances, in which the constant deposit of horny matter is not kept down by the accustomed removal or abrasion at the outer extreme. These creatures are worked when their labor is required, two or three hours in the day. M. F. says it enables them to give more milk, because they eat more. They must be exercised, says he, in order to their general health. Better that the service be profitable, is ever the peasant's plainest deduction.



(Fig. 21.)

Passing from the stalls, by the wagon and smith shops, we came upon the system of draining the father of M. F. had instituted. He has enveloped the mound upon which the farm lies, in a spiral drain, discharging its water two-thirds of the distance to its base, in a swimming pond. From this pond it issues again to water a meadow, lying upon descending ground. It is impossible to give in a diagram the just properties of the ground-plot of Hofwyl. Still the several points may be noted. (Fig. 22.) A, higher school, about 130 by 50 feet. B, the lower farm-school for poor children. C, gymnasium for sports, when the weather is unpleasant. D, a lodging and boarding-house, for the reception of patrons and others visiting the school. E, chapel. F, wagon and smith-shops. G and H, barns. I, swimming-pond, floored and walled with cut stone. j, k, l, m, commodes, about the farm. O, one of the small lakes, supplied with row-boats for the pupils and teachers.

At eleven, we returned to the gymnasium, to witness the sports of the pupils, under the direction of their master, the Professor of Mathematics. Their exercises were running, leaping, climbing, and swinging in a great variety of modes, on parallel bars. Each little group under a director who stood ready to give aid in a dangerous feat. The elder boys chose their leader, as they elect leaders in all sports, and he set them examples which they tried to follow. There was one Swiss among the number, a fine representative of the peasants who to this day, among the mountains, have their public festivals at which prizes are won in heaving the stone and pitching the bar. His strength and agility were the admiration of all. Here I remained in conversation with M. F. and the Math. Prof. an hour, when, at a bell-stroke, all the fixtures were abandoned, the pupils leaving to prepare for dinner. These gymnastic exercises are the escape-pipe, through which the surplus animal spirits make their exit, instead of festering in the organism, and imparting their conagiont to the mind, and ultimately finding an expression in the rod, or a dismissal.

It was impossible not to observe the great superiority in bearing of the some forty Englishmen over their fellows generally, from Switzerland and Germany. M. F. says they have more energy, but so high a regard for the practical—that which they can *see* to be useful—and so little, comparatively, for science or knowledge for its own sake, that though in the outset they lead the way in study, they are almost invariably outstripped by their patient, persevering companions.

On parting with M. F., he put into my hands a variety of papers, including prospectuses of the school, and plans of study, from which I shall be enabled to learn, when more at leisure, more minutely the peculiar features of this school.

Respectfully yours, E. N. Horsford.

SARATOGA COUNTY, N. Y.

Mr. Tucker—Believing that Saratoga county, as an agricultural and manufacturing district, is but little known abroad, I thought a brief sketch of ourselves might not be uninteresting to you and some of your readers. The traveller, in going to and from Saratoga Springs, by our railroads, passes over our most barren and sterile fields; hence often comes to the conclusion that there is but little here worth possessing except our "health giving fountains."

But great is the mistake. At a little distance, on either side of those roads, may be found a soil seldom surpassed, with barns and granaries as capacious and well filled as elsewhere in the Empire state. Ours is the great pork-making county, it being well understood that in this we surpass in quantity and quality our neighbors; and in the dairy, we are vain enough to believe we shall soon rival our own Orange county in butter.

The soil is much of it a sandy loam, congenial to the growth of corn and rye, though wheat and the other grains are grown in considerable plenty. For each and every product we have the best of markets, and these steadily and constantly increasing. Saratoga Springs, for three months in summer, consumes every beef, pig, lamb, chicken, egg, &c., within her reach, and these too, at prices, many times, better than could be obtained in New-York.

Congress water has a remarkable effect in improving the appetite, and whilst the drinking is enormons, there seems to be a corresponding ratio of increase with the eating propensities.

Our numerous streams are being covered with manufactories. On the Kayadarosseras, near Ballston Spa, a Lowell in machinery is springing up. Four cotton mills are now in operation, a fifth one of 150 looms, is preparing, and several others contemplated. Beside these, are woolen mills, flour mills, and other smaller works, too numerous to mention here. The Ballston works of Isaiah Blood, Esq., are in this neighborhood. They are a most splendid and interesting monument of what indomitable perseverance may do when combined with Yankee mechanical skill. These works turn out, in the scythe department alone, six thousand dozen per annum, and to those who have used them it is hardly necessary to say, "there's none better, if as good." Had I time and space, I should like to go more into detail with regard to this establishment, but I must go on, and say to those wishing further information, go, see for yourselves, it will richly repay you.

Farther up the Kayadarosseras, are Factoryville, Lindley's Mills, Rock-city, Jamesville, &c., with their woolen, paper, flour, saw, and other mills. At Rock-city is a fall of 150 feet in a mile. Some excellent water privileges may yet be secured here at low rates.

This Kayadarosseras is a beautiful stream, and were it not for its unrhymable name, its charms would long since have been sung through the length and breadth of our land.

At Fort Edward, a company have purchased the state dam on the Hudson river, and are preparing for extensive operations another year. At Schuylerville, Mr. Marshall, the celebrated manufacturer, has made an extensive purchase, which is to be improved forthwith. Then there is Mechanicville, and Waterford, with their wheels and looms in daily motion. In the north part of our county, beds of iron ore abound, which are already opened and being smelted, whilst extensive glass works are in a state of preparation. Thus, it must be seen at once that we are in the ascendant, and that with a dense manufacturing population, we shall consume at good prices the surplus of our farms. Should a foreign market be needed, we have our two railroads from Ballston Spa to carry us direct to Boston or New-York, whilst a third, (the Whitehall,) will another season connect us with the Canadas. A fourth, from Saratoga Springs to Sacketts Harbor, through the Sacandaga and Black River vallies, is proposed, and laterals and branches in various directions contemplated. Lands, in consequence of all this, are advancing, though still decidedly below the average of other places with like advantages. Few places can be found at this time offering greater inducements to actual settlers in farming than Saratoga county.

Many of the northern towns are admirably suited for the dairy, whilst the lands may be had for prices even less than the worn out tobacco farms of Virginia, so eagerly sought after by some of our northern farmers. Fearing I shall tire you and your readers, I will now close by saying if you or they shall wish to know more respecting us, I will answer any interrogatories on being addressed at Ballston Spa.

Respectfully yours, Seth Whalen.

West Milton, Jan. 15, 1846.

ANALYSIS OF SOILS.

Mr. Tucker—It is very important in the present age of agricultural science, that farmers should be thoroughly informed of the different constituents of their lands, in order that they may apply their manures in such a way as to produce the greatest and most practical results. It is true that many, by a careful and systematic rotation, so manage that while one crop exhausts a certain portion of the soil, a succeeding crop will restore it again, and render it fit for another change, and in four or five years it is sufficiently restored for another rotation. Yet in all this, what does he know of the constituent elements of the soil? About as much as he does of the moon.

According to Liebig, the stalks and leaves of plants require for their development and growth, a rich supply of alkaline carbonates and sulphates, while on the other hand, the seed requires alkaline phosphates. A soil containing a small quantity of alkali, may be fertile for grain, but for potatoes, turneps, &c., an abundance is needed.

These remarks are suggested, hoping that the editor will give a few hints, which will enable a practical farmer to analyze some of his different soils, and ascertain, if possible, what particular elements it contains, and what are necessary for the production of any crop. This seems to be the great desideratum—for men to know of what their soils consist, and what kind of manures should be applied, to produce the greatest and most beneficial results.

I would also solicit some information in regard to the best means of reclaiming an orchard, which for many years has been unfruitful. It is situated on a rather wet, but hilly soil, with a southern exposure, and, with one exception, has been pastured about twenty years.

H. Luther.

Middlebury, Vt., Dec. 20, 1845.

1. It is indeed true, that it is desirable for farmers to know of what their soils consist, and what kind of manures should be applied, to produce the greatest and most beneficial results.

But this can be attained only partially by analysis. A distinguished chemist informs us that to detect an ingredient in the soil constituting only one thousandth part of its weight, requires as great analytical skill as chemists usually attain. But there are many very powerfully active substances in the soil, constituting a much les proportion; hence we cannot avoid the conclusion that there are some important ingredients beyond the power of analysis to detect.

One or two examples may be given. A bushel of gypsum has often doubled the clover crop on land, as frequent observations have proved. But, a bushel of gypsum, dissolved and distributed through the soil as it usually is by the first rain which falls upon it, and by which it is rendered accessible to the roots of growing plants—constitutes only the ten thousandth part of the soil of an acre at the usual depth. Even one tenth of that quantity, or the hundred thousandth part, would doubtless in many cases exert very visible effects. Hence we may safely infer that there are such substances now actually as component parts of soils, which are far beyond the reach of analysis.

A hundred pounds of guano on an acre will sometimes produce important results. But a hundred pounds in the soil would only constitute a ten thousandth part. Guano consists of many different substances, some of which would be in exceedingly less proportions. To detect the presence of an equal quantity of those substances naturally in the soil is therefore quite out of the question.

There are however, some substances existing in much larger proportions, whose presence and quantity, may be well ascertained. For instance, it is often important to know the quantity of sand in a soil,—common terms of description being very indefinite,—which may be ascertained with tolerable precision by mixing with water, allowing the sand to settle, drying well and weighing. The proportion of clay may be nearly ascertained by the same way, the clay remaining in suspension for several hours, settling and drying in the same way. Carbonate of lime may be detected by effervescence in acids. Mould, though chiefly indicated by color, may be determined with somewhat of accuracy by burning, the lost weight indicating the quantity; though this cannot always be accurate, as for instance, if carbonate of lime be present, the carbonic acid would be driven off, which would also lessen the weight.

But we very much question the propriety of farmers undertaking to analyze soils. If imperfectly done, it is of little value or might mislead; and to be well done, requires an excellent apparatus, costing some money, and a great deal of time, which the farmer cannot well devote; and a considerable previous knowledge and experience, in order to attain skill. It is better to send the soil to an eminent chemist, and pay him for the job; although even then there are doubtless many very important ingredients he cannot detect, as already shown. For ordinary practice, common observation will assist much. For instance, a decidedly tenacious or clayey soil is indicated by the clods upon the plowed surface, and perhaps the number of pounds required to draw apart a certain packed portion of soil might indicate somewhat the relative proportions of clay and sand. Vegetable mould is indicated by color and texture; lime, if carbonate, by the method just described. In many cases, direct experiment with manures is worth more than any analysis could be, though analysis often *suggests* or points out in what direction experiments may be most advantageously made.

2. With regard to the orchard, apple trees thrive well on soils which are well adapted to the growth of corn and potatoes. Wet or springy land would be improved by underdraining; if poor, by manuring for crops; and a great benefit would no doubt result from a good thorough cultivation of the soil. To suffer *young* trees to stand in grass, or to be closely surrounded by wheat, barley, or any sown crops, is only another name for ruin; Indian corn will not thrive in a pasture or wheat field; neither will young trees. Old trees will endure such treatment better, being larger, hardier, and deeper-rooted, and consequently not so much affected by slight causes. Corn will do as a crop for an orchard of large trees, while potatoes do admirably as one for small trees. Large trees may occasionally be surrounded by a crop of grass or grain; but no orchard can continue in a good condition, unless it is occasionally at least, well cultivated and manured.

An orchard which has stood many years in grass, has probably become stunted and scrubby in growth; in which case judicious pruning would doubtless be a benefit.

VARIOUS FARM EXPERIMENTS,

Condensed from accounts in exchange papers.

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Experiments with Different Manures.

A correspondentof of the New England Farmer reports the following experiments with different kinds of manures for turneps applied to land of "shallow loam," which was enriched in 1844, by a green crop of buckwheat plowed under—four square rods were appropriated to each kind of manure—the rate *per acre* is given for cost and yield.

Material.	Rate per acre.	Cost.	Yield.
Crushed bones,...........	80 bu.	$60 00	160 bu.
" "	30 "	22 50	120 "
3 qts. lime and 2 lbs. sul. acid,.................	4 bu. 80 lbs.	6 00	80 "
1 load muck, 10 lbs. guano,	40 " 400 "	24 00	150 "
Dana's compost, ...	40 loads,	13 50	*
Muck,....................	40 "	12 00	*
Leached ashes,...........	400 bushels,	40 00	180 "
Manure,..................	40 loads,	40 00	80 "
Coal ashes, ...	40 "	20 00	*
Bone and leached ashes, ..	30 bu. bone & 300 bu. ashes.	......	300 "

The bone and sulphuric acid, with 5 quarts water, were soaked seven days, and then mixed with half-bushel loam. Dana's compost was of one load muck, one bushel salt, and one cask lime. The stars indicate that no turneps grew worth gathering, though larger than where nothing was applied. All were spread after plowing, and harrowed in. From our own experience, we think the stable manure would have given more than double, if it had been plowed in, and especially well mixed by harrowing. The same results are not to be expected on dissimilar soils, and not at all with different kinds of crops.

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Management of Privies.

Levi Bartlett, in his Address before the Merrimac Ag. Society, states his practice in substance, as follows, and it is one of the best modes we have seen noticed:—Adjoining his hog-house, is a yard 18 by 14 feet, dug 15 inches deep, the bottom level, and with a plank floor, and plank sides. A close board fence surrounds it. The privy, adjoining, has a tight box under it; and in an outer room is another box or sink in which all the soap suds is emptied. On washing days, a gate is opened in the sink, and all the soap suds passes by a large spout into the box under the privy, and escapes by a gate opened for the purpose, from this box, to the yard. The bottom of the yard is covered with muck or soil; a fresh supply of which is added once a month in summer. Thus by the hogs, vault, and soap suds, he gets one load a week of the richest kind of manure. Gypsum is thrown into the vault frequently. "How much," he asks, "is a barrel of soap worth for manure? It is worth none the less after having been used to wash clothes."

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Experiments with Corn.

Joseph Frost, of Elliot, Maine, gives a statement in the Boston Cultivator, of several experiments with the culture of corn, the substance of which we here give in a condensed form. The soil was all gravelly loam, except in the 4th experiment. The loads were 40 bushels, except in the two last experiments. In the second and fifth, the manure was plowed in by a second plowing—in the others it was harrowed in by the harrow or cultivator—the superiority of the crops in the former cases will be noticed. The different crops were usually cultivated and hoed twice. The amount *per acre* given in all cases.

1st. Exp., 1842—10 loads compost—manured in hill—3½ feet apart each way—yield 30 bushels per acre.

2d Exp., 1843—Same field—23 loads compost per acre—hills 3 ft. by 15 inches, two stalks to a hill—75 sound bushels per acre.

3d Exp. Grass lea, plowed in fall—17 loads compost—hills 3 ft. by 2 ft., 4 stalks to a hill—55 sound bushels to the acre.

4th Exp. Black clayey loam, grass lea—fall plowed—12 loads compost—3½ feet each way, 5 seeds to a hill—40 bushels to the acre.

5th Exp., 1844—Rye lea—fall plowed—20 loads compost, 45 bushels each—3 feet by 15 inches—two stalks left to a hill—60 bushels to the acre—probably would have been 80 bushels but for the worms.

6th Exp., 1845—20 loads compost, 50 bushels each—3 ft. by 15 inches, three seeds to a hill—50 bushels per acre.

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Comparison of Manures.

L. **Bartlett**, in his Merrimac Address states, that he applied manure of different kinds to a piece of corn, with the following results:—The best corn was that enriched with the manure from the stage-tavern; but the corn was about as good where a compost was applied, made of equal parts of this stable manure and muck. Another part that had donkey manure with an equal part of muck and perhaps a thirtieth part lime, made into compost, was nearly as good. Where common barn manure was applied, the corn was inferior to the other. Another result was interesting. The compost of barn manure and muck in equal portions, and a thirtieth lime, was applied to potatoes before oats, and after the oats was grass. The rest of the land had an equal quantity of barn manure at the same time. In 1844, the third year, the grass was decidedly better where the compost was put; in 1845, the compost ground had a heavy crop of lodged grass, with a green second growth; the other was poorer, and brown, with no second crop. The permanent action of the muck, or lime, or both, was thus shown.

CARE OF SHEEP IN WINTER.

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Mr. Tucker—My barn is forty-eight feet by fifty-six, in the basement story of which I usually winter from two to three hundred sheep. I have always been uniform in my manner of feeding, and it has always consisted of hay and sheaf oats. I have always been careful to have my hay cut at the proper season, and somewhat particular to have it well cured; hence it follows that there is but little left in the racks to be strewed round the sheepfold as litter. The oats which I feed, are at the rate of one dozen to the hundred sheep, the straw of which is scattered round the sheepfold with a view to keep it sufficiently clean for the comfort of the sheep. For the last eight or ten years I have noticed by the middle of the winter, that my sheep would commence pulling the wool from their sides and hips; and in some instances by the last of March nearly all of the wool on the hips would be removed by the biting of the sheep. I have sometimes conjectured that the itching which roused the sheep to pull out the wool was produced by the sheepfold not having been kept sufficiently littered, but of this I was never perfectly satisfied until this winter. The hay which I have used for feeding my sheep this winter, was cut on a new meadow, was coarse timothy, largely intermingled with wheat straw from the scattering of wheat the preceding year. The effects of which has been a superabundance of wheat straw and coarse timothy left in the racks; this being scattered in addition to my usual amount of oat straw, has kept my sheep bedded in the finest possible manner. Now it has followed from this or some other unknown cause, that out of about five hundred sheep there is not a single instance in which the sheep have pulled any wool from their sides, belly, or hips. I have mentioned the above facts because I believe them to be conclusive on the subject alluded to. There are large sheep raisers in the western country that have no definite conception of the cause which prompts the sheep to pull the wool from their sides and hips in the latter part of the winter. From my experience this winter I can say with confidence that the remedy is to be found in well littered sheepfolds.

Respectfully yours, N. P. A.

Wheeling, Va., March 26th, 1845.

AGRICULTURAL RESOURCES OF EDGECOMB CO., N. C.

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L. **Tucker, Esq.**—In renewing my subscription for the ensuing year, allow me to trouble you with a few desultory remarks on this region of country, little known to the agricultural world, though not the less deserving a passing notice in the Cultivator.

The county of Edgecombe, of which Tarboro is the county seat, lies just below the hilly country of the "good old North state," and in the humble judgment of the writer, possesses advantages equal, if not superior to any county of the state for agricultural purposes.

We are a law and order loving people; obey the eleventh commandment—mind your own business, and let that of others alone—work hard— keep out of debt—and through the many trying financial difficulties our country has witnessed, have always presented the spectacle, of which we can justly boast, of peace and plenty.

We have a stream navigable for flat-bottomed boats passing through the county, with various creeks and swamps tributary to it, on one of which the lands are good, and with the inexhaustible beds of marl found in nearly every section of the county, can be rendered highly productive. Little or no attention has been paid to the subject of improvement till within a few years past. The heavy drain on our population by emigration to the south and west, and the severe cropping of those that remained, brought our lands down to their *minimum* value, from which point, in the nature of things, they must ascend in the scale. I am happy to say the reaction has taken place; our population are stable, and lands now command their full value.

In the marl, found here in such abundance, and in many places of superior quality, containing as much as 75 per cent. of pure lime, our farmers have discovered an efficient restorative for their worn out lands. The low prices have convinced many that without improving, the yield will not pay for cultivation, and we have set to work in earnest, and if this spirit of improvement is kept up for many years, the face of the country would hardly be recognized by those who have left us to settle on the virgin soils of the south and west.

Your intelligent and enterprising agent here, R. N, has done much to stir up the farmers of old Edgecombe to a sense of their interests, and has persuaded many inveterate haters of "book farming" to take the Cultivator. Say what you will, the thing is now beyond cavil, that agricultural works are of benefit, of immense benefit to the country, and as friend Solon says, in his "Notes of Travel in the Southwest," "wherever *they read the papers*, works of improvement are to be seen."

The hogs bought in Albany by R. N., and particularly the big hog *par excellence*, created considerable excitement in our usually quiet village, on their arrival at our landing—for several weeks were all the agony among the farmers who came to see them. They took much better than I expected to see them with our farmers.

We have had a fine crop-year. Cotton, corn, peas, and potatoes, turned out well, and our pork will now readily command $5 per cwt. 1845 may be set down with us as the driest and best crop-year known in many.

Respectfully yours, Edgecombe.

Tarboro', Dec. 20, 1845.

Soaking Corn.—A successful farmer effects a saving of a third to one half by soaking his corn fed to horses, in water, in barrels placed in the cellar where it cannot freeze.

NEW-YORK STATE AGRRICULTURAL SOCIETY.

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Cattle Show and Fair for 1846, *to be held at Auburn, Sept.* 15, 16, *and* 17.

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PREMIUM LIST FOR 1846.

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ON FARMS.

For the best cultivated farm of not less than 50 acres, exclusive of woodland, regard being had to the quantity of produce, the manner and expense of cultivation, and the profits:

First premium,............. $50 | Second do., ... $30

Third do., ... $20.

The persons making application for these premiums, must submit written answers to a series of questions, printed copies of which may be obtained on application to J. B. Nott, Sec'y.

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EXPERIMENTS AND ESSAYS.

For the most satisfactory experiment of stall feeding cattle, with a full detail of all the circumstances,	$20
For the most satisfactory experiment in converting green crops or other vegetable matters into manure, with full details, &c.,	$10
For the most satisfactory experiment made for increasing manures in forming compost,	$10
For the most satisfactory experiment for top dressing grass,	10
" " " subsoil plowing,	10
" " " eradicating Can. thistle,	10
" " " draining,	10
" " " irrigation,	10
For the most satisfactory experiment on the improvement of seed wheat, by culture and propagation,	$10

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FARM DWELLINGS.

For the best design accompanied with plans and elevation, combining convenience, economy, and good taste.

For best,................. $15 | Second best, ... $10

Competitors for the premiums on Experiments and Designs, must forward their manuscripts to the Secretary, Albany, previous to the first of December, 1846, free of postage.

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CATTLE.

CLASS I.—DURHAMS.

Best Bull, over 3 years old, $15 | Second best,.............. $10

Third best, Diploma.

Best bull, 2 years old,...... $10 | Second best, ... Col. Tour.

Third best, Diploma.

Best yearling Bull, ... $10 | Second best, ...Col. Tour.

Third best, Diploma.

Best bull calf, ... Col. Tour, | Second best, ... Diploma.

Best cow, 3 years old, ...$15 | Second best,.............. $10.

Third best, Diploma.

Best heifer, 2 years old,.... $10 | Second best,....... Col. Tour.

Third best, Diploma.

Best yearling heifer, ... $10 | Second best, ... Col. Tour.

Third best, Diploma.

Best heifer calf, ... Col. Tour. | Second best,......... Diploma.

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CLASS II.—HEREFORDS.

Best bull over 3 years old,	$15	Best cow,	$15
Second best,	10	Second best,	10
Best bull, between 1 and 3 years old,	10	Best heifer between 1 and 3 years old,	10
Second best,	Diploma.	Second best,	Diploma.

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CLASS III.—DEVONS.

Best bull, 3 years old,	$15	Best cow,	$15
Second best,	10	Second best,	10
Best bull between 1 and 3 years old,	10	Best heifer, between 1 and and 3 years old,	10
Second best,	Diploma.	Second best,	Diploma.

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CLASS IV.—AYRSHIRES.

Best bull, over 3 years old,	$15	Best cow,	$15
Second best,	10	Second best,	10
Best bull between 1 and 3 years old,	10	Best heifer, between 1 and 3 years old,	10
Second best,	Diploma.	Second best,	Diploma.

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CLASS V.—CROSSES OF NATIVE AND IMPROVED.

Best cow over 3 years old,	$15	Third best two years old heifer,	Vol. Trans.
Second best,	10	Best yearling heifer,	$5
Third best,	Vol. Trans.	Second best,	Col. Tour.
Best 2 year old heifer,	15	Third best,	Vol. Trans.
Second best,	10		

Best heifer calf, Col. Tour.

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CLASS VI.—NATIVE CATTLE.

Best cow over 3 years old,	$15	Third best 2 yr. old heifer,	$5
Second best,	10	Best yearling heifer,	5
Third best,	Vel. Tr.	Second best,	Col. Tour.
Best heifer, 2 years old,	15	Third best,	Vol. Trans.
Second best,	10	Best heifer calf,	Col. Tour.

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WORKING OXEN.

Best team of 20 yoke from any one co.,	$25	Third best yoke,	Vol. Trans.
Second best,	15	Best 10 yoke of oxen from any one town,	$20
Best yoke of oxen,	15	Second best,	10
Second best,	10	Third best,	Col. Tour.

THREE YEAR OLD STEERS.

Best yoke,................ $10 | Second best................ [illegible]

Third best, ... Diploma.

Best team of 10 yoke from any one county, $15.

To boys between the ages of 16 and 20 inclusive, who shall exhibit the best broke yoke of 3 year old steers, of their own training, Col. Tour.

Second best do., ... Diploma. | Third best do., .. Transactions

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TWO YEAR OLD STEERS.

Best yoke, ... $10 | Second best,........ Col. Tour

Third best, Vol. Trans.

To boys under 16 years of age, who shall exhibit the best broke yoke of 2 year old steers, of their own training, Col. Tour.

Second best,......... Diploma. | Third best, ... Vol. Trans

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YEARLING STEERS.

Best yoke, ... $8 | Second best........ Col. Tour,

Third best, Vol. Trans.

To boys under 16 years of age who shall exhibit the best broke yoke of yearling steers of their own training, Col. Tour.

Second best,......... Diploma | Third best,........ Vol. Trans.

In awarding the premiums on working oxen and steers, the single teams will be subjected to a trial on a loaded cart or wagon under the direction of the committee; and particular reference will be had to the matching, training, and docility of the animals, as well as their general appearance.

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FAT CATTLE AND FAT SHEEP

Best pair fat oxen, ... $15 | Second best,............... $10

Third best, Colman's Tour.

Best ox or steer, ... $10 | Second best,.............. [illegible]

Third best, Vol. Trans.

Best fat cow or heifer..... $10 | Second best, ... $5

Third best, ... Vol. Trans.

A fat ox taking a premium as one of a pair, cannot compete singly for another premium.

Best fat sheep, ... $10 | Second best,....... Col. Tour.

Third best, Vol. Trans.

Applicants for the premiums on fat cattle and sheep, must furnish statements of the manner of feeding the animals, and the kind, quantity, and cost of the food.

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STALLIONS.

CLASS I—*for all work*.

Best, over 4 years old,	$10	Third best,	Diploma
Second best,	$5	Fourth best,	Vol Trans

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CLASS II.—*Blood*.

Best, over 4 years old.,	$10	Third best,	Diploma
Second best,	5	Fourth best,	Vol. Trans

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CLASS III.—*Draught*.

Best, over 4 years old,	$10	Third best,	Diploma,
Second best,	5	Fourth best,	Vol. Trans

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THREE YEARS OLD STALLIONS.

Best 3 years old stallion,	$10	Third best,	Diploma
Second best,	$5	Fourth best,	Vol. Trans

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GELDINGS.

Best Gelding, ... $5 | Second best, ... Vol. Trans

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MATCHED HORSES.

Best pair,................. $10 | Second,............. Diploma

Third best,.................. 2 Vols. Trans.

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MARES.

Best brood mare (with foal at her foot), for all work, $10.

Second best,·················$5 | Third················ Diploma.

Fourth··· Vol. Transactions.

Best brood blood mare (with foal at her foot), $10.

Second best················ $5 | Third················ Diploma.

Fourth····Vol. Transactions.

Best brood draught mare (with foal at her foot), $10.

Second best················ $5 | Third················ Diploma

Fourth····Vol. Transactions.

Best mare 3 years old. ······$5. | Second best, ······· Diploma.

Third····Vol. Transactions.

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SHEEP.

CLASS I.—LONG WOOLED.

Best buck,	$8	Best 5 ewes,	$8
Second best,	Col. Tour.	Second best,	Col. Tour
Third best,	Diploma.	Third best,	Diploma.

Best pen 5 lambs, $5.

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CLASS II.—MIDDLE WOOLED.

Best buck,	$8	Best five ewes,	$8
Second best,	Col. Tour.	Second best,	Col. Tour.
Third best,	Diploma.	Third best,	Diploma

Best pen 5 lambs. $5.

This class includes the South Down, Norfolk, Dorset, Natives, &c.

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CLASS III.—MERINOS AND THEIR GRADES.

Best buck,	$8	Best five ewes,	$8
Second best,	Col Tour	Second best,	Col. Tour.
Third best,	Diploma	Third best,	Diploma

Best pen 5 lambs $5

This class includes all those generally denominated Merinos, whether of pure or mixed blood

CLASS IV.—SAXONS AND THEIR GRADES.

Best buck, ... $8
Second best, ... Col. Tour.
Third best, ... Diploma.

Best five ewes, ... $8
Second best, ... Col. Tour.
Third best, ... Diploma.

Best pen 5 lambs, $5.

This class includes all those generally denominated Saxons, whether of pure or mixed blood.

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SWINE.

Best boar, over 10 months, $10
Second best, ... Col Tour.
Third best, ... Diploma.

Best sow, ... $10
Second best, ... Col. Tour.
Third best, ... Diploma.

Best lot of pigs under 10 months, not less than four in number, Colman's Tour. Second best, Diploma.

In awarding premiums on hogs, reference will be had not merely to size or present condition, but to that proportion between bone and meat which promises the greatest value from the least amount of feed.

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POULTRY.

For the best lot of Dorking fowls, not less than 3, one cock and two hens, ... $3
For the best lot of Black Poland, not less than three, ... 3
For the best lot of large fowls, not less than three, ... 3
For the best pair of ducks, .. $3 | For the best pair of turkeys, 3
For the best pair of geese, ... 3
For the best and greatest variety of barn yard fowls owned by the exhibitor, $10.

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FARM IMPLEMENTS.

Best Plow,* ...... Silver Medal
Second do .... Diploma.
Third do .... Vol. Trans.
Best subsoil plow, Silver Med.
Second do Diploma.
Third do Vol. Transactions.
Best farm wagon, Silver Medal.
Second do Diploma.
Third do Vol. Transactions.
Best Harrow, Silver Medal.
Best Cultivator, Silver Medal.
Best fanning mill, Silver Medal.
Second do Diploma.
Third do Vol. Transactions.
Best horse power, Silver Med.
Second do Diploma.
Third do Vol. Transactions.
Best corn stalk cutter, Sil. Med.
Second do Diploma
Third do Vol. Transactions.
Best threshing machine, Silver Medal.
Second do Diploma.
Third do Vol. Transactions.
Best drill barrow, Diploma.
Best straw cutter, Silver Medal.

2d best straw cutter, Diploma.
Third do Vol. Transactions.
Best corn and cob crusher, $10
Second do Diploma.
Third do Vol. Transactions.
Best clover machine, $10
Second do Diploma.
Third do Vol. Transactions.
Best flax and hemp dresser. $10
Second do Diploma.
Third do Vol. Transactions.
Best horse cart, ... Diploma.
Best ox cart, ... do
Best horse rake, ... do
Best ox yoke, ... do
Best farm harness, ... do
Best saddle, ... do
Best grain cradle, ... do
Best six hand rakes, .. do
Best six hay forks, ... do
Best six grass scythes, do
Best six cradle scythes, do
Best six dung forks, .. do
Best six axes, ... do
Best six hoes, ... do
Best hay rigging, ... $5

* The trial of plows will take place on Tuesday, Sept. 15th.

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For the best and most numerous collection of agricultural implements, $10.

Also, for the best and most numerous collection of agricultural implements manufactured in the state of New-York, by or under the supervision of the exhibitor, ... Silver Medal.

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PLOWING MATCH.

First Premium, ... $15
Second do 12

Third premium, ... $10
Fourth do Colman's Tour.

Fifth, ... Vol. Transactions.

For boys under eighteen years of age :

First premium, ... $10 | Second, ... $5

Third, ... Vol. Transactions.

One-fourth of an acre will be required to be plowed within an hour and a quarter, with 15 minutes for rest—the furrow slice to be not over 12 inches wide, nor less than 8 inches in depth. The plowman to drive his own team, and the furrow slice to remain as left by the plow.

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BUTTER.

For the best lot (quality as well as quantity considered,) made from five cows, in 30 successive days—25 lbs of the butter to be exhibited, $25.

Second best, ... $15 | Third best, ... $10

Compliance with the following rules will be strictly required of those who compete for these premiums, viz: The cows to be fed on pasture, green corn-stalk fodder, or grass cut for the purpose, only. No grain, roots or slops of any description, to be fed during the trial, nor for fifteen days preceding the trial. The cows to be owned by the competitors previous to the 1st day of Feb'y, 1846. The milk drawn from the cows on some one day during the trial to be accurately weighed and measured, and the result stated. A sample of at least 25 lbs. of the butter so made to be exhibited at the fair at Auburn, for the inspection of the examining committee. The particular breed of the cows to be stated, if known, and the method of making and preserving the butter. A certificate signed by the owners of the cows, and at least one other person who assisted in milking and making the butter, detailing the above particulars, will be required.

The executive committee believe that few if any premiums offered on neat cattle will result in greater benefit to the farming interest, than those on the products of the dairy, providing fixed rules, requiring uniformity of feed, be faithfully enforced. The [illegible] premiums is offered with the hope it will induce extensive competition throughout the state. Let this object be accomplished, and an opinion approximating to accuracy may be formed by the public which of the several breeds of cows are the best for dairy purposes, and from those that prove the best, further improvement may be made.

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Best 25 pounds made in June. $10
Second best, ... Col's Tour.
Third best, ... Vol. Trans.
Best 50 lbs. made at any time, $15.

Second best, ... Col. Tour
Third best, ... Silver Medal.
Fourth best, ... Diploma.
Fifth best, ... Vol. Trans.

The claimants for premiums must state in writing the time when it was made ; the number of cows kept on the farm ; the mode of keeping ; the treatment of the cream and milk before churning ; the mode of churning, winter and summer ; the method of freeing the butter from the milk ; the quantity and kind of salt used ; whether saltpetre or any other substances have been employed.

The butter offered for premiums must be presented in butter tubs, jars or firkins.

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CHEESE.

One year old and over.

Best 100 lbs., ... $15.
2d best, ... Col Tour

3d best, ... Silver Medal.
4th do .... Diploma.

5th do .... Vol. Transactions.

Less than one year old.

Best 100 lbs., ... $15
2d best, ... Col. Tour.

3d best, ... Silver Medal.
4th do .... Diploma.

5th do .... Vol. Transactions.

Those who present cheese for the premiums offered, must state in writing the time when it was made ; the number of cows kept; whether the cheese was made from one, two or more milkings ; whether any addition is made of cream ; the quantity of rennet used, and the mode of preparing it; the mode of pressure, and the treatment of cheese afterwards.

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DAIRIES.

For the best cheese dairy, $50 | Second best, ... $30
Third best, ... $20.

B. P. JOHNSON, of Rome, Oneida county, Chairman.

For the best butter dairy, $25 | Second do $15 | Third do $10

ZADOC PRATT, of Prattsville, Chairman.

The competitors for the above premiums must comply with the following regulations. They must state the actual product of the cheese or butter dairy, the locality of such dairy in latitude ; the composition of the soil as near as may be where the dairy farm is situated ; the kind of grass used for pasture and for hay ; the quantity, in pounds, of milk per cow on the average and in the aggregate ; the quantity of cheese or butter to the hundred pounds of milk produced ; the gross quantity of milk and cheese, or butter, produced, the quality of the cheese or butter, the method of making, the breed of cows composing the dairy, and all such other details procured as shall determine the most profitable mode of conducting the cheese or butter dairy business.

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SUGAR.

Best 25 lbs. maple sugar, .. $10
Second best, ... 5

Third best.......... Diploma.
Fourth best, ... Vol. Trans.

For the best 25 lbs. of cornstalk sugar, Silver Medal.

No premium to be awarded unless the sample offered shall be deemed worthy of it.

The process of manufacture and clarifying must be particularly stated in reference to the maple and cornstalk sugar.

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SILK.

Best specimen manufactured, (woven into cloth or ribbons,) $15
Second best, ... 10
Third best..... Colman's Tour.
Fourth best........ Vol. Trans.
Best specimen not less than one pound reeled silk, ... $5
Second best, ... Diploma.
Third best, ... Vol. Trans.

Best specimen sewing silk, not less than one pound, of domestic growth, ... $10
Second best, ... 5
Third best, ... Diploma.
Fourth best, ... Vol. Trans.
Best one-half bushel cocoons, 1846, ... $10
Second best, ... Colman's Tour.
Third best, ... Diploma.

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DOMESTIC MANUFACTURES.

Best woolen blankets, $5—Second, 4—Third, 3.
Best ten yards flannel, $5—Second, 4—Third, 3.
Best 10 yards woolen cloth, $5—Second, 4—Third, 3.
Best woolen carpet, $5—Second, 4—Third, 3.
Best tow cloth, 15 yards, $3—Second, diploma.
Best 10 yards linen, $5—Second 4—Third, 3.
Best 10 yards linen diaper, $5—Second, 4—Third, 3.
Best hearth rug, $5—Second, 4—Third, 3—Fourth, 2—Fifth, Trans—Sixth, Dip.
Best 10 yards kersey, $3—Second best, 2—Third, Trans.
Best rag carpet, 15 yards, $3—Second, 2—Third, Trans.

Best double carpet coverlet, $4—Second, 3—Third, 2—Fourth Trans.
Best pair woolen knit stockings $2—Second, Trans.—Third, Diploma.
Best wove woolen stockings, $2—Second, Trans—Third Dip.
Best cotton wove stockings, $2—Second, Vol. Trans.—Third, Diploma.
Best lb. of linen sewing thread, $2—Second, Trans—Third, Dip.
Best linen woven stockings, $2—Second, Trans.—Third, Dip
Best linen knit stockings, $2—Second, Trans.—Third, Dip
Best knit cotton stockings, $2—Second, Tr.—Third, Diploma.

Best bed quilt, or other bed or window furniture, discretionary premiums at the option of the committee

FRUIT.

For the greatest variety table apples, $5.
second greatest,.... $3 | For the third greatest, Vol. Tr.
r the best twelve sorts, not less than three of each, $3
new seedling apple, ... $3
ne greatest variety of table pears,..................... 3
he second greatest......................... Vol. Trans.
ne greatest variety of winter pears,......... " "
he best twelve quinces...................... " "
he best twelve peaches...................... " "
he best twenty-four plums, ... " "
he best six bunches of native grapes,....... " "
he best six bunches of foreign grapes,...... " "
he best dozen Figs,.......................... Diploma.
he second best, " .... Vol. Trans.
est one-half dozen oranges,................. " "
est " " lemons, ... " "
est dozen nectarines,........................ " "
est dozen apricots, ... " "
est dozen pomegranates. .... " "
est pint almonds,............................ " "

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ved, That a committee of —— be appointed by the Execu-mmittee, who shall report at the next annual meeting a list xceeding 30 kinds of apples, which shall be in their opinion apted to the economical demands of the people of this state, be best suited to the different localities of the same, com-their most extensive use in all seasons, for home consump-d for exportation, the individual names of said fruits, a g of each separate kind. with a particular description ; and that in this connection they also take into considera-several classes of fine fruits as adapted to the above pur-and —— dollars be appropriated as in the judgment of the ive Committee shall be necessary to accomplish this

mittee.—L. F. Allen. Black Rock; Dr. A. Stevens, New-Dr. A. Thompson, Aurora; I. C. Platt, Plattsburgh; Prof. son, Schenectady.

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FLOWERS.

For the greatest variety and quantity, Silver Medal.
second greatest.... Dip | For third greatest, Vol. Trans.
For the best Floral ornament. Silver Medal.
second best, .. Diploma. | For best seedling Dahlia. Dip.
rd best,...... Vol. Trans. | For the second best, Vol. Trans.
the best twenty-five varieties of Dahlias, Silver Medal.
second best,...... Dip. | For the third best,.... Vol. Tr.
most beautiful boquet, composed of not less than twelve ties. Col. Tour.
best, ... Dip. | Third best,........ Vol. Trans.
greatest variety of house plants owned by one indi-vidual. Diploma....... Second greatest, Vol. Trans.
r the best 20 varieties German asters, ... Vol. Trans.
r best six varieties carnation pink,............ "
r best 12 varieties roses in bloom, ... Diploma.
cond best,.............. .... Vol. Trans.
r best 3 varieties of Cactus in bloom,............ Dip.
r best 3 varieties Camellia Japonica, in bloom ... Dip.
r best single Camellia in bloom, ... Diploma.
st 6 Geraniums in bloom, ... Diploma.
cond best, ... Vol. Trans.

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VEGETABLES.

stalks celery, 2 vols Tr.
heads cauliflower, "
heads broccoli,.. "
white table tur-
.... vol. Tr.
carrots.......... "
table beets,...... "
parsnips......... "
onions, ... "
heads of cabbage, "
tomatoes........ "
purple egg plants, "
sweet potatoes,.. Trans.
watermelons, .. Trans

Best half peck Lima b'ns, vl. Tr.
Best half-peck Windsor beans,.............. "
Best bunch double pars-ley,.................. "
Three best squashes,.... "
Largest pumpkin, ... "
12 best ears seed corn,.. "
Best half peck table po-tatoes, ... $2
Second best. .... Trans.
Best seedling potato, ... $5
12 Canteleupe melons,.. Trans.

etionary premiums will be awarded on choice garden s not above enumerated.

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MISCELLANEOUS.

on Gate for farm purposes, ... Silver Medal.
rnamental cast-iron vase, on pedestal,.......... Diploma.
ample drain tile, ... Diploma.
uarter of an acre of osier willow, and the best specimens nufactured from the product, $8.
ecimen wire hurdle fence, to be accompanied with an ac-t of cost, Silver Medal.

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DISCRETIONARY PREMIUMS.

be awarded for—
—Stoves and other Manufactures of Iron.
—Paintings and Drawings.
—Ornamental Shell, Needle, and Wax work.
—Implements and Machinery.
for all such other articles and products not enumerated as shall be deemed worthy of encouragement

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FIELD CROPS.

Best crop of wheat raised upon any one farm, $15.
best,.............. $10 | Third best, 2 vols. Transactions
Best crop of spring wheat raised upon any one farm, $15.
Second best,.............. $10 | Third best, 2 vols. Transactions.
Best crop of Indian corn raised upon any one farm, $15.
Second best,.............. $10 | Third best, Vol. Transactions.
Best crop of barley raised upon any one farm, $10.
Second best,............... $5 | Third best, Vol. Transactions.
Best crop of rye raised upon any one farm, $10.
Second best,............... $5 | Third best, Vol. Transactions.
Best crop of oats raised upon any one farm, $10.
Second best,............... $5 | Third best, Vol. Transactions.
Best crop of potatoes, for table, raised upon any one farm, $10.
Second best,............... $5 | Third best, Vol. Transactions.
Best crop of potatoes, quantity considered, raised upon any one farm, $10.
Second best................ $5 | Third best, Vol. Transactions.
Best crop of sugar beets raised upon any one farm, $10.
Second best,............... $5 | Third best, Vol. Transactions.
Best crop of mangel wurtzel raised upon any one farm, $10.
Second best,.... .... $5 | Third best, Vol Transactions.
Best crop of ruta baga raised upon any one farm, $10.
Second best,............... $5 | Third best, Vol. Transactions.
Best crop of carrots raised upon any one farm, $10.
Second best,............... $5 | Third best, Vol. Transactions.
Best crop of peas raised upon any one farm, $10.
Second best,............... $5 | Third best, Vol. Transactions.

N B. It is understood the above premiums are to be awarded for crops raised in the usuual cultivation of the farm—to include the entire crop raised in each case It is not intended to offer premiums for crops raised on small parcels of land—by unusual manuring and cultivation.

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Best acre of corn, for fodder, $5.
Best half acre of hops,...... $5 | Best half acre of tobacco, $5
Best half acre of flax,...... 5 | Best acre of cabbage,...... 5
Best acre of broom corn, $5.
Best acre of clover seed, $10.
Second best,....... Col. Tour. | Third best, Vol. Transactions.
Best acre of timothy seed, $10.
Second best,....... Col. Tour. | Third best,.......... Diploma.

Those who present claims to premiums for farm crops must state in writing the following particulars: The condition of the soil at the commencement of cultivation for the crop, the previous crop and cultivation, and quantity of manure used upon it, the quantity and kind of manure the present season, the quantity and sort of seed used, the time and manner of sowing, cleaning and harvesting the crop, the amount of the crop determined by actual weight or measurement. and the expense of cultivation. The land shall be measured by some surveyor, who shall swear to the correctness of his survey, and that it was made with a chain and compass, and the claimant of the premium, with two other persons who assisted in measuring, shall certify under oath as to the quantity produced from the piece of land mentioned in the certificate of the surveyor—and a sample of grain shall be presented at the annual meeting, with the oath of the applicant that the same is a fair sample of the whole crop.

The statements required from those who compete for the premiums on farms and field crops, must be sent to J. B. Nott, Recording Secretary, Albany, previous to the 1st of December, 1846, and the premiums will be awarded at the annual meeting of the Society on the third Wednesday of January.

N. B. Plate will be substituted for money, on the application of the persons receiving the premium.

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PREMIUMS FOR 1847—1848—1849.

Whereas, The Agricultural Society of the State of New-York has not an experimental farm; and whereas, to some extent, satisfactory experiments can be made by intelligent farmers on their own farms; therefore,

Resolved, That the undermentioned list of premiums be offered to induce public spirited individuals to lend their valuable aid in extending the boundaries of accurate rural knowledge.

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Three premiums will be awarded of $30, $20, and $10, in January, 1848. For the best experiment upon a herd of not less than 8 cows, to determine the relative advantages of soiling, or depasturing milch cows. The experiment to be conducted as follows:

1st. The experiment must commence on the first day of May, and be continued until the first day of November.

2d. The cows to be divided in two lots of four each. One lot to be soiled, the other depastured. Before commencing the experiment, each lot must be weighed and the record of the weight returned to the committee. It is necessary that the two lots shall be as near alike in weight and milking properties as possible.

3d. The milk of each lot to be weighed separate daily.

4th. The manure made from those soiled to be ascertained in cords.

5th. An account to be kept of the expense of soiling, also a detailed statement of the entire management, together with the measurement of the land occupied in soiling, and each to be returned to the committee.

6th. A description and measurement of the land occupied for pasture, also to be made.

7th. Each lot to be weighed at the conclusion of the experiment.

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For the best experiment to be continued through three crops, to ascertain in bushels of grain and weight of stalks or straw the actual value of manure to a farmer. The experiments to be conducted as follows, viz:

1st. Three contiguous acres of ground shall be selected.

2d. One acre of which shall be manured with not more than ten cords of common barn yard manure the first year, and plowed under. The second acre to be manured with fermented or composted manure, to be applied in any manner the experimenter chooses—but a full account of the mode is to be made, and the manner of application. Also, an accurate account of the cost of the material and its application.

3d. The three acres are to be planted with corn the first year; the second to be sowed with barley or oats; the third crop to be winter grain; an accurate account of the yield of each crop to be kept.

4th. A full account of the whole management and all the details respecting the culture and the circumstances affecting the crop.

5th. The several kinds of soil to be particularly described, and specimens transmitted to the State Society for analysis before commencing the experiment—and also at the conclusion of the experiment—discriminating carefully between each acre.

For the best, $40. 2d best, $30. 3d best, $20.

N. B. The specimens of soil to be selected for analysis, must be taken from the surface in different parts of the acre. Where the acre is green sward, the sample must be taken just at the termination of the roots of the grass. Specimens should also be selected from the depth of 7 or eight inches. At all events, immediately below the usual depth to which the plow runs. The specimens of soil must in no case be mixed; and should consist of about 1 lb., sewed in a cotton bag.

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$20 will be paid at the annual meeting of the society in 1848 to the person who will make the most satisfactory agricultural experiment, accuracy and the importance of the experiment to be taken into consideration. A full detail of the experiment and its results must accompany the application.

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For the best managed entire flock of sheep of not less than 100, to be awarded at the annual meeting in 1848.

Best, $30 2d best, $20 3d best, $10

The applicant for these premiums will be required to furnish the Society with the following information, viz:

1st. The kind and quantity of food and its value.

2d. The quantity and quality of wool—this to be determined by its being submitted to the stapling of some respectable manufacturing establishment, whose certificate shall accompany the application for the premium.

3d. The number of the increase.

4th. Kind of sheep and the number of ewes, wethers and bucks.

5th. The value of sheep when fattened, and the value of lambs for the butcher.

WOODLANDS.

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MR. TUCKER—There are two objects which actuate in the removal of timber from the forest. The first of these is to clear lands hitherto unimproved, and render them fit for cultivation, while the second is to furnish fuel for the necessary purposes of heat, and timber for the various uses which the circumstances of life require. Where the former object is to be attained, it is desirable to perform the operation of *cutting over* at a season when the roots and stumps will be least likely to throw up new shoots, and also when decay will be the most rapid and effectual, while in the latter case a contrary effect is sought for, and a time should be improved when reproduction will be likely most effectually to ensue. Nature, as if ever mindful of the convenience as well as the wants of man, has kindly provided for both desideratums, and it is only for us to consult her wise arrangements in order to avail ourselves of the facilities she offers in order to effect our own purposes. And as if more fully to aid in our designs in regard to both, she has arranged her plans so as to bring the time for our action at a season when other labors do not present their most pressing demands.

The economy of vegetable physiology is a subject which may well invite the study of the cultivator of the soil. It is one with which most cultivators of the present day are somewhat familiar, so that any remarks on that point, if our limits would permit, would, perhaps, be wholly out of place. It is a fact well known *to all* that there are seasons of the year when the flow of sap or blood of plants flows most freely, and the slightest wound upon a shrub or tree will cause it to flow abundantly. Then we have only to carry the cause further and we see a much greater effect. Cut off a tree near the ground at these seasons, and this *bleeding* will be manifest at every pore until a fatal exhaustion takes place, and *death*, and its consequent attendant, decay ensues. These seasons, as every body knows, are spring, while the freezing and thawing of the ground continues, and in autumn, while similar agencies are going forward. These are unquestionably the best times for destroying timber lands, and causing root and stump to pass quickly away. All who are acquainted with the growth of chestnut timber, must know full well its astonishing powers at reproduction by throwing up suckers. We once, in our ignorance, had the presumptive folly to cut several trees of this timber, in the freezing and thawing month of March, but no monument of this folly now remains. From about twenty *bleeding stumps* produced by the operation, not a single sprout ever sprung up to gladden our eyes with the cheering assurance that "there is hope of a tree though it be cut down," and but a very few years went by before every vestige of these decaying stumps was gone. This sad experiment, be it known, was performed in *woodland* where no cattle, or sheep, or any such things were permitted to graze, consequently the failure was owing wholly and entirely to the chopping at an injudicious and fatal time. But the evil did not stop here. The quality of the timber was depreciated by the operation; it was neither so fine in consistency, nor so durable as neighboring trees cut at more appropriate seasons.

Ye who value your timber and your timber lands, we say to you, one and all, keep your axes out of them so long as the Ides of March hold influence. During this sloppy winter month you had better be employed in preparing fuel at your doors, and splitting rails on some dry bank, from timber previously cut. "Woodman," if you value your timber land, "spare that tree," at all times and in all seasons when trees bleed from the slightest incision of the axe, or from any other little accident which may produce a wound from which the sap will flow.

We have now given what we consider the very worst time for cutting timber, with regard to the preservation of the woodlot, and have very honestly exposed an act of our own folly in proof of it. With equal frankness, we offer our experience with regard to the very best time for this operation, and this part of the story is soon told. December and January are decidedly the best months for this part of the farmer's service and it may, in most seasons be continued until the middle of February. Beyond this time, your deponent would not go, and he would rather keep four or five weeks back of it, *shuddering*, as near as possible to the winter solstice. It is a fact that all may witness, if they will not take our word for it, that the stumps where trees are taken off in winter will bleed more or less in spring, and further, that the longer they have been cut the less the flow of sap will be, a fact owing to the circumstance that the longer the pores or amputated sap vessels have been exposed to the atmosphere, and perhaps partly from the influence of frost, the more inactive they become, and in consequence the less facility they offer for the escape of sap. Now it is this bleeding that we would stop, and turn all the resources of the roots into a new channel, nourishing a new set of shoots. Some cheap substance might, undoubtedly, be applied to stop it entirely, but farmers do not know how to spend time to doctor stumps, though *some* of our medical faculty might, perhaps, be well spared for that service.

But again to our experiment. We have cut chestnut trees in December, that gave shoots of a dozen feet the next season, while other reproductive trees gave growth according to the character of their species in the same ratio.

Next to the dead of winter, June, the sweet month of smiling skies and more smiling flowers, offers perhaps, the best time for cutting timber. The forests are then again taking a temporary rest, and the functions of life are comparatively relaxed and inactive. The influence of heat too, for though heat is the reverse of cold, its effects are in some respects similar, undoubtedly contributes to make the month favorable.

But here we would say again, keep near the summer solstice, for the nearer the better. We have cut timber in June and had sprouts start handsomely that season, and in the dry season of 1845, we noticed such a fact particularly. There is one important consideration to be attended to when timber is cut in this month. It should be divested of its bark as soon as possible so as to give a full exposure of the newly formed cambium to the influence of the sun and the atmosphere. When this is done, the cambium or sap-wood acquires a firmness which will enable it to last, even if exposed to the weather, for years. Indeed, in point of firmness, it will not fall much if any behind the heart-wood of the same tree. We know of no purpose for which timber can be applied by the farmer, for which we can offer any objection to its being cut in this month, if it seasons with the *bark off*. There is one consideration only, in our mind, which gives winter a preference for chopping. That is, that it is a season when the farmer is more released from other labors, and hence, in our climate, it is a season which seems admirably set apart for the operation. But chop when you will, if for timber, strip the bark as soon as possible, if you would arrest the progress of decay.

Another consideration to be attended to to facilitate reproduction, is to cut close to the ground, and economy in timber also indicates the same thing.

Yours, truly, WM. BACON.

Mount Osceola, Jan. 10, 1846.

ON PLOWING.

MR. EDITOR—Reverting, as is my custom during stormy weather, or a season of comparative leisure, to the back volumes of the Cultivator, for instruction, as well as amusement, and sure to find it, my attention has been often directed to the subject of *plowing*—that most important of all labors—and my mind having of late been much exercised on that topic, I have been led to re-examine the very numerous articles relating thereto, which I find scattered up and down your invaluable pages, forming an almost endless variety of information on a business that demands far more of our consideration than it has ever yet received. And assuredly, the most interesting and important of all those articles is that which occurs at p. 10, vol. VIII., number for Jan., 1841, continued at p. 11, of the next number, which may be said to form the text-book of this country as well as of England, embracing as it does, a very minute account of the most important trials of the plow in both countries, and which may be said to set the matter pretty much at rest, so far as comparative merit is concerned. But it must be confessed, that is a subject which I do not at present go in for. My business being with a much *more* important consideration, namely, the degree of cultivation bestowed *by the plow*—of far greater consequence than that performed by the harrow and roller combined; the pulverization being as perfect at the bottom as on the top of the furrow, quite out of the reach of those implements, and rendering, in a great degree, their aid unnecessary, especially in autumnal plowing, which is beginning to receive that consideration which its importance demands. And to this view of the case I am brought by the late trial of plows of the Philadelphia Agricultural Society's exhibition, during the three days of which, the center-draught plow of Prouty & Mears, was kept going on an adjoining field, from which a very heavy crop of corn had been removed; the stalks, full of vigor and of enormous growth, with weeds four feet in height, being buried as though they had never been, by a pair of horses, carrying a furrow nine inches deep and fifteen inches wide; the plow, a considerable portion of the time requiring no holder. Here I saw and understood the meaning of the term *spade plowing*; for assuredly, no one could more perfectly pulvervize the soil with the spade than was done, to the depth of nine inches, with the plow. And on visiting the scene of action, after rain, snow, and frost, I am convinced that a double plowing and thrice harrowing after any other plow could not have brought about such a state of thorough cultivation, with no danger of winter washing. It need not be added, this plow again took the first premium at the match.

But I have an act of justice to perform, which I respectfully ask you to assist me in rendering, by the use of your very widely disseminated pages, in declaring that to Messrs. Prouty and Mears, are the public indebted for the first introduction of the principle of Centre-Draught among us. And although the Farmer's Monthly Visitor observed very truly, that "Mr. Prouty of Boston, is *undoubtedly* entitled to the credit of inventing and making this first great improvement of the American plow," yet there are many who consider the question of priority of invention not fully decided. To such I have only to produce the testimony, borne by yourself, in the article above mentioned, as affording the clearest proof that at the trial at Worcester, in 1840, which embraced the plows of Prouty & Mears, Ruggles & Nourse, Howard, Wilson, Stevens, Stewart, Bergen, Whiting, and Barnaby & Mooer, the Prouty plow was the *only one* that worked on the principle of Centre-Draft. It is well known, that, with a *single exception*, plows are so constructed, that the point of the share is in that line, &c. "The plow noted as *an exception*, being Prouty & Mears' Centre Draft, which obtained a premium of $100 at the Worcester fair, and which worked 100 per cent. easier than some other plows on the ground, the draft being equal on both sides of the beam, as was proved by its showing no disposition to deviate from its course when left to its own guidance, and of course, imposing no labor on the plowman or team in their efforts to keep it in a proper position."

To those who enquire "What is the meaning of the term center-draught?" a writer has given a satisfactory answer. "The center-draft of a plow is proved by the power applied for its guidance—and the plow that has a perfect *center draft*, would require no guidance at the handles in a soil of equal moisture, provided the draft was applied in a straight line with the furrow." Prouty's plow must therefore be the *beau ideal* of the principle of center-draught, according to the report of the committee on plowing at the meeting of St. George's, Del., which says—"The second premium for *plowing* is awarded to Wm. Banks, Prouty & Mears' center-draft plow, No. 5½, it being impossible to award the *first* premium to the plow—so perfect in all its parts as to go without guiding—the premium being intended for the plowman and not for the plow."

I find that this plow was not permitted to enter for the premium at Prince George's Md., the present year, "having already obtained the highest award"—the highest praise in the committee's power to bestow, and I would beg to recommend the practice worthy of adoption elsewhere, as being far preferable to the award of second premiums, which never give satisfaction to any one. *Middletown, Del.* L. D.

IMPROVED SHORT-HORN CATTLE.

LUTHER TUCKER, ESQ.—Having recently received a letter from THOMAS BATES, ESQ., of Kirkleavington, Yorkshire, England, and believing some extracts from it will possess sufficient interest to insure them a cordial reception to many patrons of the Cultivator, I herewith take the liberty of enclosing them to you for publication. It will be perceived that these extracts, principally relate to premiums recently awarded to Short-Horn Durhams, at some of the principal cattle shows in England and Scotland. They can hardly fail of being interesting to gentlemen whose efforts are directed to the improvement of the cattle of this country, and particularly so, to such as have purchased from my herd, cattle possessing the same strain of blood as those to which Mr. Bates alludes.

Mr. Bates remarks, "I think I gave you an account in my former letter, of Mr. C. W. Harvey's, of Walton, (near Liverpool,) successful exhibition of his Short-Horn bull Walton, at the Beverly show of the Yorkshire Agricultural Society, having obtained the highest premium for the best bull of any age. This bull Walton, was from the own sister of the dam of Lady Barrington, 3d, (513) which latter cow I sent out to America to you, Sept. 1844. The sire of Walton is Locomotive, (4242,) whose dam and your Duke of Wellington's dam is my premium cow Oxford, (752.)

"The bull Walton was also exhibited at the late great meeting of the Liverpool Agricultural Show, and received the highest honor of being the best aged bull exhibited beyond two years old; and his son, named the Lad of Safton, received the highest honor of being declared the best bull under two years old. Lad of Safton's dam was got by my Duke of Northumberland. In the evening after the exhibition, the bull Walton was shipped, and sent to Dumfries to the great annual meeting of the Highland Agricultural Society of Scotland; where the premiums are open to all England; and he there again received the highest premium for the best Bull of any age; and was esteemed the best bull ever exhibited in Scotland, of the Short-Horn breed. The second best bull exhibited at Dumfries, of the Short-Horn breed, belonged to Mr Wm. Jobson, and was got by my second Duke of Northumberland; so that the best bulls exhibited were of the Duke of Northumberland tribe of cattle, and owed their superiority to that blood. The public mind in England begins to see more and more of the merits of this tribe of cattle. The late Earl Spencer and other breeders, have recently been purchasing descendants of my stock. Mr. C. W. Harvey, owner of Walton, previous to his exhibition at Liverpool, let a son of Walton for 60 guineas, (about $300,) for the use of 12 cows; and I have let bulls higher than this—75 guineas for the use of 12 cows. I have no doubt that Mr. Bell, (who is his owner,) will readily sell the young bull out of your Lady Barrington, 3d, at 100 guineas, though he is a red color. The fashion here is roan, and such is the caprice here at present, that a roan color will give one-third more price. Walton is a roan, out of a red, Lady Barrington, and his calves are mostly roan or white.

The original Dutchess family are red and white, with an occasional roan. My 50th Dutchess is white, the only white one that has been of that family, and she is by Duke of Northumberland."

I might multiply extracts from the letter of this veteran scientific breeder, which doubtless would be acceptable to many who are devoting their time and means to improve the breed of cattle of this country; the eminent success which has crowned the steady, unwavering perseverance of this gentleman for a period of 60 years, would prove an immense value to the agriculturists of this country, should the example here presented be followed by our countrymen, in the improvement of the different breeds of cattle in this country. Mr. Bates is now over 80 years of age, and is blessed with the enjoyment of uninterrupted health, and continues to devote his time and energies to agricultural pursuits, with a perseverance which is characteristic of the devotion of a man of thirty. Permit me to add in the language of another, speaking of Mr. Bates as a breeder:—"This gentleman was not the copyist but the contemporary of Mr. Colling, with whom he lived on terms of friendly intercourse, and as breeders, they indulged in a free interchange of views and opinions. It was not, therefore surprising that they arrived at the same conclusions, and pursued the same means, and aimed at the same results. Those who feel any interest in the subject will find much that is curious and instructive, in a close examination of Mr. Bates' course of breeding, which nay be done by reference to the Herd-Book, and by a little subsequent arrangement of the materials, he will hen find such an investigation is the better worth perusing, since the awards of the Royal Agricultural Society in 1839, have borne such ample testimony to its uccess. Those who make this analysis may have to cknowledge that "*close breeding*" in competent hands, s the acme of the science."

Mr. Bates principally attributes his success in breeding to the blood of his Dutchess tribe, which were riginally bred by the ancestors of the Duke of Northumberland, of which he says, in a communication ddressed to the publishers of the print of his celebraed prize bull Duke of Northumberland—"I have undoubted information from the best authority for saying hat this tribe of Short-Horns was in the possession of the ancestors of the present Duke for two centuries, and that Sir Hugh Smythson, the grandfather of the present Duke, kept up the celebrity of this tribe of cattle by paying the utmost attention to their breeding, having purchased my original cow of this tribe of cattle of the late Charles Colling, Esq., of Ketton, near Darlington, 35 years ago; they had been in the possession of Mr. Colling 20 years, who purchased his original cow from Stanwix, of the agent of the Duke of Northumberland, and called her Dutchess."

Mr. Bates has retained in his posession all the females of the descendants of this heifer. The record of the untiring zeal and perseverance displayed by Mr. Bates and many others in England in the improvement of their herds, should stimulate the breeders of cattle in this country to renewed perseverance. There is now in this country some of the best breeds of cattle that England possesses, and we can have more; and no farmer who has the means at command, could make a more profitable use of those means than to purchase at the present prices some of the best improved breeds for his farm, and when he has them pay that attention to their breeding which he should do, and he would find his own interest eventually promoted, and would have the satisfaction to reflect that he was contributing his aid in advancing the great interests of husbandry.

Truly yours, &c. GEO. VAIL

Troy, Jan., 1846.

INDIAN CORN CULTURE AT THE SOUTH.

L. TUCKER, ESQ.—This letter is particularly intended for the perusal of the planters in the southwest. If there be any particularly successful in making large crops of corn per acre, say in a field or crop of one hundred acres or more, that will average all over, say thirty bushels to the acre, I should be much gratified to see a statement in the Cultivator, of the whole process of making said crop; first, the preparation of the land; the distance in planting observed; whether in hills or drill; one stalk or two stalks to the hill; and if drilled, the distances, &c., observed—what manures are used, and if cotton seed, how applied; on the surface or below; and an exact account of the plowing and hoeing at each working given to the corn. It is thought by many that making corn crops is a task so easy, it requires but little attention, and no doubt but the above inquiries will startle some, thinking the questions asked were already known to any who had made five crops. A great deal is said here about making corn of late, and a great deal more has been said to have been made than really has, for no planter in my knowledge knows for certainty what he has had housed; all is guess work, and what is certain, the corn never holds out in one fourth of his calculations. It is gathered and housed unshucked. The only basis for calculations are the wagon loads, no two men agreeing on what the wagon contains; and last, but not least, the acres in the fields planted are all guess-work. As such, one is not far wrong in surmising that from beginning to last, all is guess-work and uncertainty; nothing based on certainty or facts.

Our lands are fresh and strong, and with proper cultivation they ought to be made to average at least thirty bushels of corn to the acre. For my own part I have heretofore been injured by crowding too much; our climate being too hot, it has invariably fired. I have manured highly with cotten seed; distance 3½ by 3½ feet one stalk, and 5 by 5 feet two stalks, which shared the same fate. It appears to me that in strong lands well manured, corn should stand these distances and do well; nevertheless the results of the last two years have proven disadvantageous. My first plowings have been deep; first siding the corn with a skooter, and breaking out the balk with a turn plow; the last plowings very light, depending on good hoeing, dirting the corn with the hoe. My lands planted are porous earth, light soil, and will yield on an average, eight hundred pounds of cotton per acre, unmanured.

In conclusion, if there are any planters who do make for certain, thirty bushels of corn to the acre, all round, in a crop from one hundred to one hundred and fifty acres, with the manures at hand on our plantations, they will please publish in the Cultivator the whole process of so doing, and much oblige A YOUNG PLANTER.

Eufalla, Alabama, 1846.

PREVENTIVE OF THE POTATO ROT.

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MR. EDITOR.—It appears to me that the attention of your correspondents has been directed more to the *cause* or nature of the potato disease, than to any specific remedy. Some have ascribed the cause to unusual dews, fogs, heat of the sun, small insects, or parasite mushrooms. We may, I think, safely conclude that the disease is entirely atmospherical, and as *inexplicable* as epidemics that effect the human or animal system. If so, then the only object would be to place the vines in a state in which they would not receive the disease. Thus the ravages of the wheat fly are avoided by sowing earlier than usual, and also rust in wheat by sowing early on elevated lands.

As it respects the numerous *preventives* that have been suggested, none of them appears to be of any general utility. The strewing on ashes, lime, or plaster; the cutting off of the tops; the drying them in the sun, before putting them into the cellar, are only laborious, and at best, partial remedies. The suggestions of a gentleman fiom Virginia to plant early, and *at a certain depth*, on light, elevated soil, and to cover the vines two or three inches with leaves, would be, I think, of no general utility, except the early planting. For I find by observation and extensive inquiries among farmers, that potatoes are affected in every variety of soil, and that every kind of potato is subject to the disease; that is, the same kind will be affected one year and not another, and on all varieties of soil. From these facts, I have concluded that it is not in the *kind* of potato, or *state* of soil, but in the *time* of planting, or rather, *state* of the vines when the epidemic appears.

Therefore, *assuming* that the disease is in the air, and that vegetables derive by far the greater part of their nourishment and substance from this element, I conclude that the disease is absorbed by the vines, *when* they are in a *state* to receive it, and by them conveyed to the potato among nutritious properties.

As to the time the disease appears, much will depend upou the temperature of the climate where the potato is planted, and the *period* of the maturity of the vines. In Vermont, I conclude that the disease appears from the middle of August to the middle of September, or *when* we begin to have heavy dews, and damp, chilly nights. Then the leaves become slightly struck with rust or blight. This kind of weather produces rust in wheat. But the common potato rust, which comes in July or August, must not be taken for the disease, for rust of potato tops is not a new thing.

Now, in this region, the tops of *early* planted potatoes generally become so far matured in the fore part of September, that they cease to absorb the atmospherical properties. Hence, if this *transition* takes place before the disease has been conveyed to the roots, the potatoe is safe. I have been led to thus fix the time of the appearance the disease from practical observation. I planted six kinds of potatoes on separate plats in 1844, all on good warm soil. Three of the kinds were planted about the last of April, and the others about the last of May. The *tops* of the first three plats were partially *dry* by the first of September—the others, not until the first of Oct. The first plantings were free from the disease; the last were greatly affected by it. I tried the the same experiment on six kinds last year, and the result was precisely as the preceding year. A neighbor planted the early kidneys in April last; the tops were dead in August. Some of the potatoes remained in the ground until Nov. They were perfectly healthy. He planted, from the *same* lot of seed, about the first of June, a small patch near his barn, the tops of which grew rank, and were green until killed by the frost in October. The potatoes were greatly diseased. Since then, I have ascertained that the tops of those potatoes that have proved to be diseased were generally green in September, or at least at the time of digging. It does not, however follow that every field will be affected where the tops are thus immature. I have found two exceptions in fifty cases. In one case, the potatoes were planted in July, and were so thrifty in September that the disease did not affect them. In like manner human constitutions are not *equally* in a condition to take at one time the *same* disease. In the other case, the potatoes, being planted in a high frosty region, were killed by a frost in the fore part of September, before the disease reached the roots. Hence very early or very late planting will escape the disease. But early planted potatoes are decidedly better for the table or for stock than late planted unripe ones. Therefore, let *all kinds* of potatoes, except those that are *very* long in coming to maturity, be planted early, (for the climate where they are planted,) that the vines may partially ripen before the time of the appearance of the disease. It is no matter what the kind of soil is, or the kind of potato, if neither will greatly prolong the maturity of the vines. But avoid planting near barns, where the soil is exceeding rich, or in low, wet places. Observe these rules, and we think that in usual seasons, from 200 to 300 bushels of good healthy potatoes per acre, will be obtained.

This process may also save the potato crop in Ireland. I am assured by emigrants that potatoes for the summer market are planted early, and are ripened in a pleasant, genial season, while those for winter use are not planted until may or June, for the sake of a long growth, and a larger yield, which exposes them to the disease.

KITTREDGE HAVEN.

P. S. To have large thrifty vines in June, through the influence of spring or summer showers, spread in March or April your *entire seed* on grass plats, the south side of buildings, and cover them with straw, or blankets, during frosty nights. The sprouts thus obtained will accelerate vegetation, while celler sprouts retard it. *Shoreham, Vt.* K. H.

CORN MARKER.

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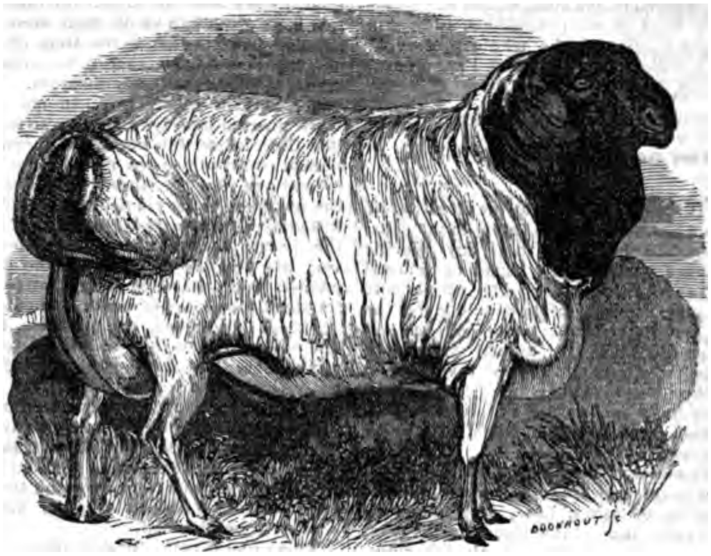
MR. TUCKER—Herewith I send you a description of a corn marker which I have used for several years, and which I think works much better than the kind I have generally seen in use, especially on stony land. Very likely the principle may have been adopted by others, but I have never seen one except my own. Instead of pins or teeth, I use *runners*, made of hard wood plank, about three feet long, and eight or ten inches wide. In constructing it, take a four inch hard wood scantling of the required length for four runners, and saw in ganes about an inch deep, just the thickness of the runners—then saw ganes into the runners about one foot from the fore end, two inches deep, and wide enough to let in the scantling. These ganes must also be made so that the runners and scantling will drive together tight. Then put a three-quarter pin through the scantling, and well into the runner, and they will not be very likely to separate. Then with a large auger put a pair of handles through the scantling, of sufficient length to raise the fore end of the runner by bearing on, in case of coming in contact with a tight stone or other obstruction. A tongue or shafts may be attached to the two middle runners or to the scantling in any manner most convenient, only it should be firm, so as to draw steady. The runners should be square at the fore end (and not turn up like a sled runner,) which will enable them to remove all loose stones and such like obstructions, instead of running over them or round them, which is the great objection to those constructed with teeth. The same principle is equally applicable to markers for turneps, carrots, &c.

The handles may be supported by putting a rail or something of the kind across the top of the runners for them to rest upon. CYRUS INGALLS.

New Hartford, Feb. 11, 1846.



FAT-RUMPED SHEEP.—(Fig. 23.)

THE AMERICAN SHEPHERD,

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Being a History of the Sheep, with their Breeds, Management, and Diseases: Illustrated with portraits of different Breeds, Sheep-barns, Sheds, &c. By L. A. Morrell.

We announced this work some months since, in advance of its publication; but since its appearance, have not until now had the opportunity of noticing it as its merits require. The book contains a large amount of information, acquired from various sources, in relation to the subjects of which it treats, and we think it ought to be in the possession of every man in the country who keeps more than half a dozen sheep. It embraces 437 pages, and is divided into chapters, under the following heads: Properties of Wool; History of Sheep; European Sheep; British Breeds; Sheep of the United States; Summer Management of Sheep; Winter Management; Breeding and Crossing; Structure of the Sheep; Surgical Observations. The following extracts from the chapter on Winter Management, will be seen to contain sound practical observations:

BREEDING EWES.

"This portion of the flock demand no especial attention beyond a full measure of food, until the approach of spring. The course of management will depend on the time of yeaning, which, if fixed for the month of April, they will require a large measure daily through March of potatoes for the assimilation of milk. In addition, nothing better can be supplied them than a half pint each of wheat shorts, mixed with a little barley or oatmeal. Oil-cake and corn meal are not so suitable, as they do not afford as much *casein*, the only nitrogenized element, as the reader has been informed, of milk. Their fodder through the winter should be of a miscellaneous character. Pea and buckwheat straw are highly agreeable to them, especially the former, which, from its succulency, is well suited to their situation.

"The reader is referred to the correspondence in the Appendix for many valuable hints on the management of breeding ewes, when the yeaning takes place in April. In conclusion, comfort, quietness, and generous feeding are cardinal points of attention with breeding ewes, through the whole period of gestation."

HOSPITAL FLOCK.

'This is the general appellation of such sheep as are in low condition, proceeding either from poor keep, or temporary illness.

"The attentive and well-ordered sheep husbandman will not be troubled with many of this class, for he will not overstock, neither will he permit any to remain on his hands till they have become too old; thus few will enter the "poor house" to reflect unskillful management. It is scarcely necessary to say, however, that every good flock-master will provide a place for the reception of sheep under consideration, as often, in spite of his humane care, disease will make its way to some individuals, which, in that event, require removal from their strong and healthy comrades, and treated accordingly. After the disease is subdued, their diet should depend much on the character of the malady. As a general rule, their food at first should not be of an exciting nature, especially if the disease was seated in the stomach, or intestines. But all suitable advice in this regard will be found in the history of diseases. When a sheep is seen declining in flesh, let it be removed forthwith to the hospital, and after a few weeks perhaps it may resume its place in the flock from whence it was taken; this is often so, if the removal is instant in the early stages of decline. Variations of the food will greatly contribute to restore invalids, as well as those in poverty of flesh."

The cut at the head of this page is given in Mr. Morrel's book, and is a correct portrait of a "fat-rumped" Persian ram, which belonged to the Zoological Society of London. There are several varieties of the fat-rumped sheep, but we have not space to go into a particular description of them. Most of the sheep of northern Asia are of this description. The manner in which they accumulate fat is a striking peculiarity of the race. The accumulation which gives rise to the name, commences about the loins, and swells gradually into a large mass towards the rump. The soft oily fat which constitutes this excrescence or fat-rump, sometimes weighs in a single sheep from 20 to 40 pounds—the whole carcass weighing not far from 200 pounds. There is both a horned and polled variety of the fat-rumped sheep. The figure is of one of the latter, in which variety the accumulation of fat on the rump, is not of the enormous size spoken of.

Small Farms in Flanders.—It is well known that Flanders is one of the best farming countries in the world, if not the very best. The farms are small, not averaging more than 50 acres each. Some are held on lease, others not. The leases are three years, or some multiple of three, up to fifteen.

ORCHARDS AND ORCHARD FRUIT.

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equest for information on this subject from Wm. irritt, of Carrollton, Ill., was received last autumn, ing accidentally mislaid, has been deferred till eseat time. He wishes to know, briefly, the best of converting an old orchard of natural fruit, into ees of the best varieties; a selection of kinds for hard of four to six acres, to give a succession of and the best management in setting out a young rd.

Fo improve the orchard of natural fruit, it must e *pruned*, by sawing or cutting off smoothly with s, near the upper part of the main trunk, during r, most of the large branches. A portion of the r branches, which are left, may then be grafted the desired varieties; or the young and vigorous which will spring up the following season, may lded. The wounds made by the removal of large , should be covered with a warm mixture of tar rick-dust. When the shoots from the grafts or ave grown a year or two, the remaining needless es may be taken off.

form handsome and convenient trees, the heading should be done as near as possible to the upper nity of the main trunk, and from this point the shoots will mainly issue, and form a much tree, than if the old branches themselves are ed to bare poles, as is too frequently the case. Fig. 24, represents a tree pruned as it should be; fig. 25 exhibits two instances of bad but very common pruning. Old trees are destitute of young branches at the desired central point; and hence grafts are often set in far out on the side branches, which can never form good tops; to obviate which, prune them in, and wait one season, and there will be an abundance of central shoots, which e either budded or grafted.

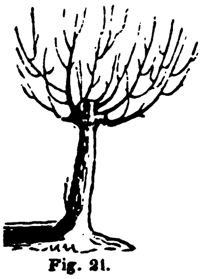

Fig. 21.

tting out a young orchard, unless the soil is naturery fertile, it should be made so by manure in tivation of crops, either before the trees are anted, or immediately afterwards. Very large several feet in diameter, should be dug, and filled, in contact with the roots, with a third of old rotnure mixed *very thoroughly* with two-thirds of hich, with good cultivation, will make the young row most vigorously, bear young, produce fine ruit, and soon repay twenty times the cost of g the holes. Then in setting out, spread out e fingers carefully all the fine fibrous roots, and he hole is nearly full, settle the earth through all erstices among the roots, by pouring in a few of water. The tree must be tied to a stake by a straw to prevent whipping about with the wind; many trees are lost by neglected staking. The soil must be kept well cultivated with some *hoed* crop for several years afterwards, as potatoes, beans, carrots or ruta-bagas. Corn shades the trees too much.

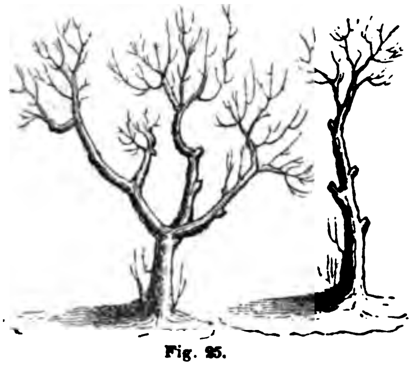

Fig. 25.

In furnishing a list, almost every cultivator will differ. The following are mostly well known; and if every cultivator who is acquainted with others equally good, will add one-half as many more to the list, the catalogue will not be a long one. Where several acres are to be planted, a greater number of each variety is to be taken. Winter apples and long-keepers, being of more value in market, and also continuing in use several times longer than summer and autumn varieties, a correspondingly greater number of each of these should be set out.

Summer Apples.

Early Harvest,
Summer Rose,
Sine Qua Non,
Summer Pearmain,
Red Astrachan,
Summer Queen,
Early Sweet Bough,
Golden Sweeting.

Autumn Apples.

Gravenstein,
Porter,
Late Strawberry,
Summer Pippin,
Fameuse,
Rambo,
Fall Pippin,
Jersey Sweeting.

Winter Fruit.

Bellflower, (yellow,)
American Golden Russet,
Rhode Island Greening,
Swaar,
Esopus Spitzenburg,
Jonathan,
Peck's Pleasant,
Tallman's Sweeting,
Danvers' Sweet,
Ladies' Sweet,
Baldwin,
Blue Pearmain,
Hubbardston Nonsuch.

Long Keepers.

Roxbury Russet,
Northern Spy,
Newtown Pippin,
Black Gilliflower.

AMERICAN HEDGES.

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A few weeks since, we noticed some instances of good and successful management of hedges. It has been since suggested to us, that a very important operation was too briefly noticed to be intelligible to many readers. This was *Laying* and *Plashing*. We have noticed many hedges which were sadly inefficient from thinness and gaps near the bottom, which might thus have been made impenetrably strong.

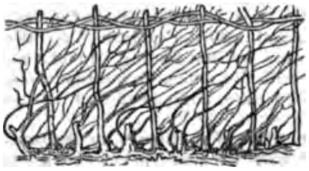

Fig. 26.

The mode of performing this work is represented in the annexed figure. It is usually done in winter. In England, well-managing farmers divide the whole length of their hedges into about twelve parts, and plash one of these parts each year, thus keeping up a system of successive renovation every twelve years; though hedges are sometimes known to continue in the best condition twice that length of time. The operation consists in first clearing away briars, small branches, &c., and cutting off the needless branches and stems, leaving straight upright stems in the middle of the row. The best and straightest of these, are selected for live stakes, and their tops cut off at a height of 3½ or 4 feet. They should be, if possible, at equal distances of about two feet; but as they cannot always be had so regularly distributed, occasional dead stakes driven into the ground become necessary. The roughest are then cut out, leaving a proper number for plashing among the upright stakes, to form a kind of rough wicker work. These are then laid hold of, and bent down in one direction, and a hack is made into them near the surface of the ground with the knife or bill; the pressure with the right hand, and the stroke with the left, being at the same moment, the stem is bent partly down and cut partly through, and cannot regain its former position. They are then, as the work proceeds, woven backwards and forwards among the stakes, in a slanting direction.

When a portion of the hedge is thus treated, slender sticks or poles are cut, and wattled in among the stakes, within about an inch of the tops, by twisting backwards and forwards, and crossing them on alternate sides of the stakes; the second set of poles overlapping the preceding, so as to bring all to a stiff straight line. The live stakes, in consequence of being surrounded by the hedge, are apt to send out shoots thickly at the top, and not below, unless prevented by being cut half through at the ground. When finished, the refuse is to be gathered up and removed. Strong leathern mittens, with long sleeves, are needed by the man who does the work.

MERINOS IN VERMONT AND NEW HAMPSHIRE.

Mr. Tucker—I submit for the perusal of the readers of the Cultivator, a few notes taken in a recent tour across the Green Mountain state into N. Hampshire.

Monday, Dec. 29th, 1845, I started in company with Mr. D. A. Bennett, of Bridport, for the purpose of visiting some of the most noted flocks of sheep in Vermont, and one in particular in New Hampshire. The first flock of importance that I shall stop to notice was that of Mr. Merrill Bingham, of Cornwall. In passing his place his man was approaching the sheep yard with a bushel of potatoes on his shoulder, which he scattered along on the snow, then slipped the bars, and out came thirty or forty noble fat ewes, "pure Paulers," as he termed them, and set themselves busily at work devouring the potatoes; they were not cut, but whole, and that appeared to be no obstacle in the way of the sheep as they were very soon disposed of. Mr. Bingham then showed us a buck of the Rambouillet breed, recently from the flock of Mr. Collins, of Connecticut.—He is carrying his old fleece, a practice which is always to be condemned in my estimation, as injurious to the animal, and misrepresenting their true condition. However, he is a very good sheep in appearance, covered with a coat of wool that is soft and even. From Mr. Bingham's we drove to Mr. Lincoln's in Brandon, where we found some very good sheep which he has selected from some of the most noted flocks in Connecticut, New Hampshire, and Addison county, Vt. We called at Mr. Hinds', near by, but finding him absent, we took a hasty survey of his splendid Rambouillets, also a very fine colt in his yard, and passed on to Pittsford.

Dec. 30th. Called on Mr. Wm. Barnes, of Rutland, where we were treated with great attention and kindness, and shown some of the best Saxon sheep that I have ever seen out of Addison county. Many of them, Mr. B. informed us, were from the flock of the late H. D. Grove, Esq., of Hoosic, N. Y., or their direct descendants. The shape of their bodies and the size of their limbs are strong indications that they possessed sufficient constitution to enable them to endure the severity of our long winters; their wool is long, fine, clean, being free from yolk, and shear on an average 3¼ lbs per head, worth at least 50 cents per pound to the manufacturer. Mr. Barnes has one of the best houses in the country, built of brick, and his out buildings and fixtures for the care and accommodation of his sheep are not inferior to the comforts and conveniences he has provided for himself and family.

From Mr. Barnes' we drove to Mr. Kelley's, a short distance from Rutland village, where we found some very good sheep, but Mr. K. being from home, we left his place and drove to Mr. Hull's, in Wallingford. Here we saw a superior flock of sheep; better flocks, take them from old to young, (and his flock numbers from 400 to 500,) are "few and far between.' After dining with Mr. H. we left Wallingford and crossed the mountain to Ludlow. The next morning, Dec. 31st, we drove through Proctorsville and Cavendish, all within 4 or 5 miles of each other, and each containing a woolen factory. We reached the Connecticut river about four miles below Windsor. Shortly after passing the village, we saw in two or three different places the operatives at work on what is called the "Central Railroad." Surely Vermont has at last struck one blow for internal improvements; what ten years will do for her is veiled in the future, but "we Yankees" prophecy great results.

At Queechy village, in Hartland, we crossed the Connecticut, and soon arrived at the mouth of Mascoma river, in N. H., which brought us on to the line of Concord road. Here we found them making railroad in earnest. From the Connecticut river to Enfield, a distance of ten or fifteen miles, we counted clubs of 12 to 25 men at short intervals, engaged in leveling the hills and constructing their embankments.

Arrived at the Shaker village in Enfield, we found many things that attracted our attention. and more than that, an abundance that is capable of feasting the eye of the agricultural tourist. The village is composed of three families. We called at the trustees' office of the middle family, where we were received in a very friendly manner by the trustee, Caleb M. Dyre, and treated with all the hospitality characteristic of that order of people. On looking about their premises but a short time, we were compelled to admire the order and arrangement of their dwellings and out-buildings.

Simplicity, neatness and economy appeared to prevail throughout the whole establishment. Their buildings are principally built of wood, large and roomy, without cornice, which gives them rather a novel appearance at the present day, and mostly painted yellow. In the rear of the trustee's office, and about the centre of the buildings occupied by the middle family, stands a large building, four stories above the basement, composed of granite. This we were informed was used as a place of lodging and dining; though we did not think it expedient, from the shortness of the time we had to spend here, to be very inquisitive respecting their religious tenets, we supposed it also to be their place of worship. This family contains 150 persons.

Jan. 1st, 1846. Rose at the ringing of the bell at half past 4. Before the twilight of the morning had lit up the eastern horizon, the streets, yards and shops were all alive with industry; each with a light in hand appeared to be attending to his own business; some were feeding their teams; some repairing their sleds, while others were busily at work in their respective shops. The greatest industry and neatness appeared to prevail in-doors as well as out. As soon as it was sufficiently light, we visited first the cattle yard, where we found eight as fine pair of working oxen, yoked and ready for business, as I ever saw standing together in one yard. Color mostly red, and red and white, a cross of Devon, Durham and native. Many of them were fat enough for first quality of beef, soft coated, rich and mellow handlers. We were next shown a two year old bull, and two bull calves; they were all large and fine animals. The trustee prefers the Durhams for cows and the Devon for oxen. We next visited the sheep yards, where we found a flock of strong, healthy looking sheep. They are of the Guadaloupe breed, and said by the trustee to have been bred pure. They are unquestionably great shearers, being clothed with a thick coat of wool, which was of good length, and many of them we found covered with very fine wool. On inquiring the weight of fleece and prices obtained for their wool, we were informed that they were the owners of a factory; that they manufactured more wool than they grew, and in consequence of manufacturing their own wool they sheared without washing. But it is my opinion they will shear as many pounds of clean washed wool as any breed of sheep I have ever met with. They appeared no ways anxious to part with any of their sheep, but after some conversation we prevailed on them to sell us six ewes and a buck, which we put into our sleigh, already prepared for the purpose, and brought away.

But before leaving the Shaker village, I wish to give you a description of their mode of making fence; first, their posts are of granite, which are split as true and as straight as a chestnut rail, these being drilled for a bolt at top and bottom, are firmly planted in the ground at a proper distance from each other according to the length of their fence boards. In the next place the boards, 8 or 4 in number, according to width, are placed upon the posts, then with a cap that reaches from top to bottom, with an iron bolt and nut through the post and each end of the cap, secures the boards firmly to the posts. We also noticed in several places on both sides of the Connecticut river, long strings of fence constructed in this manner, which I think must be quite durable, if not cheap.

The thought struck me as I passed some of these granite post fences, what a convenience it would be to have some of these granite hills scattered over the wide prairies of the west.

We returned by the way of West Windsor, where we bought of Giles Wait, Esq., 20 superior merino ewes which we left for a second load; from this place we drove in the evening ten miles to Weathersfield, put up at Danforth's Inn, and called on the Hon. Wm. Jarvis half an hour or so, made known our business, heard some remarks upon the subject of importing Spanish sheep, received an invitation to call the next morning and look at his sheep, which may form the subject of another communication. J. N. Smith.

Vergennes, Vt., Feb. 4, 1846.

DWELLING HOUSES.

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Mr. Tucker—In the numerous plans of houses which have appeared in the Cultivator for two or three years past, I have seen much to admire and some things to disapprove. Health, comfort, convenience, elegance, should be studied; but the more important should not be sacrificed to the less important parts. For instance, in the plan of the elegant and showy residence of Mr. Hyatt, in your January number, there is a spacious drawing room, &c. &c., but up stairs there are two bed rooms 7 by 9½ and 7 by 10 feet.

Sleeping rooms should always be as large as possible, and it is infinitely more important that attention be given to these, than to those more showy rooms that are seldom occupied. But in the plan above alluded to, there is a still smaller room, 6 by 7 feet, designated as the servant's bed room, and that, too, connected with "the steam and unpleasant odors" of the kitchen. I would suggest that this room be used for a *store room*, without which no house is complete, and that the servants be allowed a more healthy lodging.

My better half, sitting at my elbow, says she would like to have some of your correspondents furnish a plan of a house or cottage, suitable for a large family, in which all the rooms should be on one floor; for, she says that running up and down stairs makes the women look old while they are young, and that a cellar kitchen is an abomination. And further, she thinks that what little scolding and fretting is ever heard among them, is owing very much to the ill judged plans of their houses. So much for her opinion and mine about houses.

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MR. QUINCY'S ADDRESS.

The address of Mr. Quincy, in your last number, I have read with unmixed pleasure. It is so simply yet elegantly expressed, so true to nature, so confirmed by universal observation and experience, that I involuntarily wished it were printed in letters of gold, and sent to every family in the United States. Let farmers read it, and learn not only to be content with their condition but to see that they move in an elevated sphere, and occupy an enviable place. Professional men of every name, merchants, and men of every class, may in the perusal of it, derive both pleasure and profit. I would suggest the propriety of its being printed in the form of a tract, with a view to its wider circulation. If no better way be found, let the American Tract Society adopt it, and scatter it broadcast over the land.

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PUMPKINS.

For the encouragement of others to go and do likewise, I would state that last season I planted a piece of corn for table use, just 3 rods in width by 5 in length, and as usual, planted one or more pumpkin seeds in every hill. The corn was tolerably good, but the pumpkins were so large and so abundant, that I carefully counted them when they were gathered, and found 824. The ground was so nearly covered with them that they became the subject of remark by most passers-by, and the inquiry was often made how so great a crop was produced.

Something over a year since I had 120 barrels of night soil put upon three-fourths of an acre (of which the above piece was a part) which, after being mixed with ashes, lime, and stable manure, was thoroughly incorporated with the soil; and this, I believe, was the immediate cause of the extraordinary crops which I gathered. But there were plain indications in the fall that the manure had only begun its work, and hence I am expecting a more remarkable yield from that land the ensuing year.

Night soil is one of the strongest of manures, and farmers greatly overlook their interests when they neglect to avail themselves of it. In England it is held in such high estimation, that a class of men crave the privilege of collecting it from the cities and large towns, without expense to the owners of the premises, and after making it into a compost, sell it to farmers at very high prices. They often have scores of orders for it, long before they have ability to supply, and the demand is constantly increasing.

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POULTRY.

In Mr. Bement's valuable Book on Poultry, two facts are omitted, by which I have been led astray. One is, that the eggs of the Muscovy Duck require to be set upon *five weeks* in order to hatch, instead of *four*, as in the case of other ducks. The other is that the Pea Hen does not lay till three years of age. H. A. P.

Buffalo, January, 1846.

TO DESTROY QUACK GRASS.

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Mr. Tucker—When I took possession of the farm on which I now live, I found several acres of one field *very thickly filled* with quack grass. Indeed I think it was the most perfect mat of quack grass I ever saw. It had been the previous year planted with corn. Acting upon the well established principle that "plants cannot live without breathing," or in other words, that the roots must die unless the tops are suffered to grow—in the month of April I plowed the ground with a shallow furrow, and a few days after gave it a thorough harrowing. As soon as the blades *began* to appear above the surface of the ground, I plowed and harrowed again. This process was repeated seven times, and at each time the plow was run a little deeper than before—the last plowing being about ten inches deep. The quack grass had all disappeared, and not a vestige of it has since been seen.

The plowing was not *deepened* to facilitate the destruction of quack, but to give the ground a thorough summer fallowing and fit it for wheat, with which it was sown about the fifth of September, and as some persons fear that much plowing injures land, I will state the result.

The field contained 48¾ acres, all of which was summer fallowed by being thoroughly plowed from three to seven times. The growth of wheat was large on the whole, but largest on the portion which was plowed most. The whole field was injured by rust—the largest growth being injured most, as it was considerably lodged. The yield of wheat was 1540 bushels. The variety was the "improved white flint." E. Marks.

Tyler P. O., Camillus, Dec. 22, 1845.

Guano Poisonous.—The Dublin Farmers' Gazette mentions the case of a man who lost his life by holding a corner of a guano-bag in his mouth, by which a portion of the dust was drawn down his throat.

POTATO WASHER.

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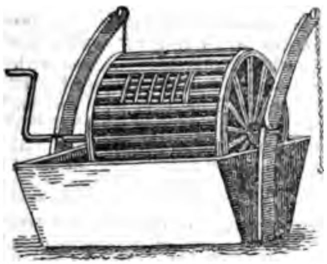

Fig. 27.

THE extensive prevalence of the potato disease in England, has called out ingenuity in combining machines for washing the roots preparatory to their manufactory into starch flour. One of the best is represented in the annexed figure, and may prove useful to those who adopt the very proper practice of washall their roots, before giving them to their domestic animals. It is like the cylinder churn, with cross bars so close, that none but the smallest potatoes can fall through. The trough is filled with water, and by the revolution of the cylinder, the roots are soon made clean. Chains fastened to the upper extremities of the inclined posts, are then hooked into eyes in the axle of the cylinder, and the rotation proceeding, the cylinder is lifted out of water, and rolling up the posts, is brought by the inclined position of the latter, directly over a wheelbarrow or hand-cart placed beside the trough, when the trap door being opened, the roots are at once emptied into it.

Carrots and all other roots given to horses, should without fail be first washed clean; and the practice should not be omitted for cattle and sheep.

THE POTATO DISEASE.

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WHILE it can only be tiresome to every reader to publish the numerous conflicting and unsatisfactory statements and opinions on this subject, it may perhaps be interesting to present to our readers a brief abstract of the communication of the government commissioners to Ireland. This commission consisted of Professors KANE, LINDLEY, and PLAYFAIR, who stand high among the first chemists and physiologists of Europe. At the request of the British government, they made a laborious and thorough examination.

In adverting to the theory, of the difficulty being originally caused by a fungus of the genus Botrytis, which is supported by the fact that it is always or nearly always found with greater or less distinctness in diseased specimens, they give it as their decided opinion that this theory as yet remains at best doubtful; among other reasons for this they say, "We are also unable to reconcile with the theory of the potato disease being *caused* by parasitical fungi, the remarkable fact, that, in its present form, it is certainly of modern origin. That it may always have existed is possible, though of this we have no proof; but at least there can be no doubt that it has only manifested itself to any considerable degree, within the last few years. We cannot suppose the Botrytis, which observers find to be the kind of fungus that attacks the potato, to be of recent creation. We must assume it to have been co-existeht with the potato itself; and therefore we must conclude that some recent causes have come into operation favorable to its increase to the present alarming degree."

Without pretending to decide the cause, they suggest its connection with the cold, cloudy, and ungenial weather of the past season in the north of Europe; they allude to the fact that the potato is a native of a warm, dry, and sunny country; and that the disease is unknown at Genoa, Marseilles, and other places of southern Europe. Among the mass of conflicting evidence they have obtained, they consider the following facts established:—

"1st. That potatoes planted early in the season are more healthy than those planted later.

"2d. That the crop has suffered less in dry, elevated, sandy districts, where the inflence of the season was mitigated by the slowness of growth, or compensated for, by the natural warmth of the soil.

"3d. That the late varieties of potatoes are more diseased than the early ones.

"4th. That the present disease seems to be confined to the northern parts of Europe and North America, and to be unknown in the countries to the southward."

They recommend autumn or early winter planting, crops so treated having been unusually productive, and remarkably free from disease. This would do well for the mild winters of England and Ireland, but would not answer for the northern states of America. The depth planted was about six inches.

They disprove by facts the opinion that old varieties are more affected; but state that some varieties are much tenderer than others, and remark that the "Irish cup" has best resisted the attacks of the disease. They recommend sound seed for planting, or if diseased, that they be rendered green in the sun; that fresh ground be chosen, or that where a diseased crop has not been taken: and that the land and the seed both be well limed.

The preceding are the principal points of their report, which was made late in autumn, and in which they admit that a great deal is involved in uncertainty. They are to pursue their investigations further.

CULTURE OF SPRING GRAINS.

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SPRING WHEAT.

There are many sections where spring wheats are the only varieties that can be cultivated to advantage. In all places where snow accumulates to a great depth, the success of winter wheat is rendered uncertain, owing to the liability of its being winter-killed. In such cases, the farmer resorts to spring wheat as the best substitute at command, and in many cases it gives a return, which, both for quantity and quality, leaves no cause for dissatisfaction. Spring wheat is said to contain a larger proportion of gluten than winter wheat, and it has hence been inferred that bread made from the former is more nutritious. According to the analysis of Sir H. Davy:

	Gluten.	*Starch.*
100 parts of the best Sicilian wheat contained,	21	75
100 parts of spring wheat, of 1804,	24	70
100 parts of good English wheat, of 1803	19	77

Preparation of the soil, quantity of seed, and time of sowing.—Spring wheat is usually cultivated on land that has been occupied the preceding year by some hoed crop—corn, potatoes, &c. Where there is no danger of the attack of the fly, which works in the head, (the *Cecidomyia tritici,*) it is best to sow the crop as early as the state of the ground will admit, or as soon as it is fairly free from frost. One good plowing is sufficient—in fact we have known excellent crops produced by working the ground thoroughly with a cultivator harrow, the feet or teeth of which penetrate the ground and pulverize it to the depth of several inches. Manure is not usually applied for this crop. Long or unfermented manure tends to rust the straw, and on this account it is only applied to the crop of the previous year, and then it becomes so far decomposed as to be in a proper state for the wheat. The seed is usually sown on the furrow, and well harrowed in. The quantity sown, per acre, is generally two bushels.

Varieties.—The kinds held in the greatest estimation in this country, are the Black Sea, Italian, and the Tea wheat. Of these, the Black Sea is the most hardy, and generally gives the best yield. This valuable variety was first brought into notice in this country by PAYSON WILLIAMS, Esq., of Fitchburg, Mass., some twenty-five years since, and it has now become widely disseminated. It is said to have been originally brought from the shores of the Black Sea, in Asia. The Kennebec (Me.) Agricultural Society, have made several importations of wheat from the Black Sea. The impression prevailed a few years since that the kind introduced by Mr. Williams had declined in productiveness, and the society for this reason thought it advisable to make a new importation. After one or two failures, we believe they succeeded in obtaining a kind supposed to be in some respects superior to that first introduced. It should be remarked, however, that in some sections, and under good management, the Black Sea wheat has considerably improved by cultivation in this country. The yield of this variety varies of course with the soil and season, but perhaps twenty bushels per acre may be said to be an average crop on medium soils. We have often known upwards of thirty bushels grown per acre, and in a few instances have seen well authenticated statements of fifty bushels per acre having been produced.

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OATS.

Oats are more hardy than wheat, and will grow on many soils not suitable for that grain. In mountainous sections, where the soil is too wet and cold for any other kind of grain, they frequently give excellent returns, and it is very common also, that the weight per bushel is greater in such sections than in those favored with a milder climate and more fertile soil. In many parts of Ireland, and in the greater portion of Scotland, the oat crop furnishes the only reliance for breadstuffs; oat meal, in various forms, being the chief article of subsistence.

Oats are undoubtedly far richer in nitrogenous or muscular matter, in proportion to the weight, than wheat. A comparison, according to the analysis of Prof. Johnston, shows this. One hundred pounds each of fine wheaten flour and shelled or hulled oats contain:

	Wheat.	*Oats.*
Muscular matter,............	10 lbs.	18 lbs.
Fat,........................	3 do	6 do
Starch,.....................	50 do	65 do
	—	—
	63 lbs.	89 lbs.

This may serve to give some explanation of the fact that the muscular power of horses is greater when fed on oats than when kept on any other food; and it serves also to lessen our wonder at the athletic feats, corporeal strength, and power of endurance shown by the stalwart Highlander, reared on this simple but nutritious fare.

Preparation of the ground, quantity of seed, and time of sowing.—The earlier this crop can be got into the ground the better. One plowing, if well done, is generally sufficient. The seed may be sown on the furrow, not less than three bushels per acre. Three bushels is the quantity we have formerly been in the habit of sowing per acre; but we have observed that nearly all the extraordinary large yields which have been lately obtained were from a larger quantity of seed than is generally used, and we should not hesitate to use three and a half bushels.

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PEAS.

Peas in many parts of the country are a valuable crop. Like other leguminous plants, they rather ameliorate than exhaust the soil, and in this respect furnish an excellent preparation for other crops. In some districts they are adopted as a "green fallow" for winter wheat, with excellent effects, as they leave the ground clean and mellow.

Peas are highly nutritious as food for animals. The proportion of nitrogenous or muscular matter they yield on analysis, is much greater than is given by any kind of grain, and they are often used, either by themselves or combined with oats, for fattening swine, as well as for feeding horses. They are also used to a considerable extent in domestic cookery, forming very nourishing and palatable soups. In some countries they are also mixed with grain, ground and made into bread.

Peas are sometimes sown with oats, in the proportion of one-third peas to two-thirds oats. A variety of peas which has rather a light vine is preferable, as the ranker kinds are apt to overrun the oats, and lay too close on the ground, but the straw of the oats will hold up the lighter ones, so that both the oats and peas will fill well.

Preparation of the soil, time of sowing, and quantity of seed.—A loamy soil, rather inclining to clay, is best adapted to peas. Early sowing generally gives the best crop. Very hot weather is unfavorable to their filling, and it is hence advisable to have the crop well advanced before the hottest part of the season comes on. A sod which was plowed the previous autumn, well harrowed, makes a good bed for peas, but any good sward well broken up and mellowed, will answer—and if sod ground cannot be had, that which has been under cultivation one or more seasons may be taken. No manure is generally needed; but if any is put on, it should be a small quantity of that which is thoroughly rotted, spread on the furrow and harrowed in. A large quantity of manure, or that which is in a green state, makes too great a growth of vines and tends to blight.

The quantity sown per acre varies somewhat with the kind of pea, some being of a more spreading growth than others, and requiring less seed. It is usual also to sow a larger quantity of very large peas, than of small ones, because the number of peas or germs is greater in the same measure of small ones. The large marrowfats, for instance, are double the size of some others. From three to four bushels of seed per acre is the quantity usually sown.

The covering of the seed is best performed by a small plow, or by a set of small plows in a frame, called a "gang-plow." It is difficult to bury peas with a harrow, many being always left on the surface, where it is attempted. A depth of about two inches is the proper one for covering. A good way is to pass the harrow over the field after the peas are sown, which will prevent them from rolling into rows or bunches, and then plow them in with a shallow furrow. The varieties adapted to field culture are the Canada field pea, the marrow-fat, and the black-eyed pea. The yield on good soil is from thirty to forty bushels per acre.

Garden peas, or those for early marketing, should be put in the ground as early as possible. Select warm, dry ground—it can hardly be too dry for *early* peas—and deposit the seed either in rows or broad-cast, as soon as the frost is out. The earliest varieties are the Early Washington, Cedo Nulli, and Prince Albert.

To destroy the pea weevil, (*Bruchus* [illegible]) which is so troublesome, immerse the peas in water, boiling hot, for two minutes; then take them out and mix plaster, dry ashes, or air-slacked lime with them, till they will readily separate in sowing or planting. No fears need be entertained that the hot water will prevent the peas from vegetating—not one in twenty will be hurt at all.

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BARLEY.

This grain is cultivated in some sections of this country to advantage. It is not, however, very extensively grown. The reason probably is, that on good land for wheat, as much of that grain can be produced per acre, and with no more labor than is required for barley. Still there are some soils and situations not well adapted to wheat, which will produce good crops of barley.

Barley furnishes an excellent food when ground into meal, for fattening swine and cattle, or feeding milch cows, and the whole grain is the best of food for feeding poultry. The meal also makes bread which is used extensively in some countries, and is well relished by those who are accustomed to its use. In this country, however, its culinary use is chiefly for making warm cakes, similar to those of buckwheat, for which it is highly prized by those who have tried it. The grain, when divested of its husk, forms the *pearl barley* of the shops, so much esteemed for soups and broths.

In nutritive properties, barley, as compared with wheat, is stated by C. Johnson, in the Farmers' Encyclopedia, as follows:

	Nutritive matter.
100 parts wheat yield of.........	78
100 parts barley,................	65

The principal purpose, however, to which barley is appropriated, both in this country and Britain, is the making of malt for beer, ale, &c., a purpose for which it is superior to any other kind of grain. After having been passed through the malting process, the "grains" are used for feeding animals. They are much used in the neighborhood of cities, for feeding milch cows

They tend to produce a great flow of milk, but it is thought their effect is rather injurious to cows of weak constitution, as the grains relax the system, and by highly stimulating the lacteal glands may leave the animal poor.

The *straw* of barley is reckoned preferable for feeding stock to that of any other grain. It is soft and sweet, and cattle which are in their prime, and that neither give milk nor are required to labor, will winter well on this article alone. Sheep will also do well on it with the addition of a few roots, and a little grain towards spring.

Varieties.—There are many varieties of barley. The usual designation is by the number of rows which form the head: thus we have the two rowed, the four rowed, and the six rowed barley. A kind called the Chevalier barley, from the name of the gentleman who first brought it into notice, is in great repute in England on account of its superior productiveness, weight, and, according to the statements of some brewers, its greater quantity of saccharine matter. The late Lord Leicester made numerous trials with this kind of barley, the result of which proved it to be superior in weight to the best of other kinds, by at least ten per cent—its average weight being fifty-seven pounds per bushel. Another advantage, in the opinion of Lord Leicester, which this kind of barley possesses, is the habit of tillering or spreading, by which, he thinks, a saving of half a bushel of seed may be made per acre.

There are likewise two or more varieties of *naked* barley, so called from the grain being detached from the glume or chaff. A *two* rowed kind of this description has been known in England many years, and the writer remembers to have seen it cultivated in Massachusetts upwards of thirty years ago. The cultivation of this kind has been generally abandoned, on account of its want of hardiness, &c. A *six* rowed kind of naked barley is also cultivated in Europe, (and we have lately heard of it in the hands of a few in this country,) which is thought to be greatly superior to the two-rowed kind. C. Johnson, in his Farmers' Encyclopedia, says it is greatly esteemed for its fertility. It is also stated that its cultivation had been tried in France, where it was highly recommended by M. Mazuceo, who states that "it weighs as much as the best wheats, and its quality resembles them so much that it may be used for the purpose of making good bread, and also for pearl barley. In mountainous countries its produce is twenty-four to one." An extract is also given from a communication to the Board of Agriculture by Warren Hastings. He observes: "that it is of the greatest importance to promote the culture of this sort of grain." He adds: "It is the corn that, next to rice, gives the greatest weight of flour per acre, and it may be eaten with no other preparation than that of boiling. It requires no dressing when sent to the mill, having no husk, and consequently produces no bran. It is gathered into the barn, and may even be consumed, when the seasons are favorable, in about eighty or ninety days after being sown; and there is no species of grain better calculated for countries where the summer is short, provided the vegetation be rapid. It appears to be this kind of barley to which we have several times alluded as having been produced by Mr. SPINNER, of Herkimer.

Besides the kinds of barley above enumerated, which are all *spring* varieties, there are several *winter* kinds, which, like winter wheat, are sown in the fall. The best of these is said to be the Siberian winter barley. Whether, however, it would endure the climate of this section, can only be determined by trial. At present we have not known of this variety having been introduced into this country.

Preparation of the soil, time of sowing, and quantity of seed.—The best soil for barley is a warm loam, inclining to sand. If the soil is not too compact, so as to break up in lumps, one plowing will be sufficient; but if hard lumps appear, they must be reduced with the roller and harrow, following each other alternately till a good *tilth* is produced; and in such cases it may be expedient to give a second plowing. If the preceding crop, (which of course should have been some *hoed* crop,) was well manured, no dressing will be required for barley. The quantity of seed varies from three to four bushels per acre—the latter quantity has been generally sown where the best crops within our knowledge have been obtained. It should be sown in this latitude before the first of May, if practicable.

We should have observed above, that one of the principal recommendations in favor of the culture of barley is its exemption from the attack of several insects which in many instances so seriously injure wheat—particularly the yellow worm or maggot, the larva of the *Cecidomyia tritici.*

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LAYING DOWN LANDS TO GRASS.

In connexion with wheat, oats and barley, clover and grass seed are usually sown—that is, the land is technically, *seeded down*. According to the experience of the writer, grass succeeds better with barley than with the other grains. Oats, on most soils, are less favorable to grass than wheat and barley. The quantity of seed used of the different clovers and grasses, varies much with the nature of the soil, and under the management of different farmers. Some soils are better adapted to one kind of grass and some to another. Timothy, for instance, does not succeed on very loose, dry soils, but is adapted to those more moist and tenacious. Red clover does not do well on cold and wet lands, but will flourish in situations so dry that but few of the true grasses would be able to sustain themselves. It should of course be the object of the farmer, to adapt the kind of plant to the nature of the soil.

For pastures, there is a great advantage in having a *variety* of herbage plants, as the appetite and health of both cattle and sheep is known to be thereby promoted; and there is besides a benefit in having plants which, from ripening at various times, afford successively a fresh growth through a large portion of the season. For hay, also, a variety of plants is preferable, as the hay is thus rendered more palatable, and probably more wholesome, to stock of all kinds; but the kinds of grasses sown together should not ripen at different times, as recommended for pastures. To make hay of the best quality, all the herbage should be in nearly the same state of ripeness when cut.

Where the object is hay, and the soil of a medium character as to dryness, we have used with good results the following mixture:

Of red clover,	8 lbs. or 4 qts.	for 1 acre.
Timothy, (*Phleum pratense,*)	8 qts.	
Red-top, (*Agrostis vulgaris,*)	1 bushel	

If the object is only clover as an ameliorating crop, or to occupy the land only one or two years, we should sow no grass seeds with it, but should increase the quantity of clover seed to twelve or fourteen pounds per acre. If the land should be unfavorable to clover, and permanent meadows were intended, we should only sow timothy and red-top—say twelve quarts of the former and a bushel and a peck of the latter. It should be borne in mind that clover is only biennial, therefore when sown with perennial grasses it interferes with their growth only two years; in fact, its growth generally diminishes considerably after the first crop is taken. Timothy and red-top, when sown with considerable clover, are usually seen but little in the first crop; in the second they increase, and after that the clover dies out, (except a root is occasionally brought in from seed,) and the grasses take its place.

For pastures, with a soil of medium dryness, the following would be a good mixture:

Red clover,........................	2 quarts.
White do.	2 do

(If this is produced naturally in the soil the seed may be omitted.)

Kentucky blue grass, (*Poa pratense,*)	8 quarts.
Timothy,........................	4 do
Orchard grass, (*Dactylis glomerata,*)	1 bushel.
Red-top,........................	¼ do

On soils too wet for red clover, we should omit that, and increase the quantity of red-top and timothy.

Manner of sowing.—A very common mode in some sections, is to mix the clover and grass seeds together and sow them after the grain has been sown and once harrowed; but the writer has sometimes adopted the mode of mixing the whole with the grain, sowing all together. By wetting the grain, the clover and other seeds (having been well mixed by themselves) may be made to adhere to it in such a manner that they will be pretty equally distributed over the ground.

A good time to sow clover and grass seeds on land occupied by *winter* grain, is to scatter them on snow in a mild day in March, or in more southern latitudes, at an earlier period.

CULTURE OF RHUBARB.

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Only two or three years have elapsed, since the Pie Plant was quite of ordinary size, and some eight or ten stems were regarded as only calculated for one pie. But the improvement in this valuable plant within the past two years, is really astonishing. We have looked with wonder upon several varieties which have lately been introduced into our nurseries from abroad. During the present season, Messrs. Prince & Co., have exhibited before the Horticultural Society, a specimen, the leaf of which was nearly as large as an ordinary umbrella, and the stem long enough for a walking stick. This variety is called the Leviathan, and justly answers to the name given it, for its leaves are enormous, and generally weigh from two and a quarter to two and a half pounds. Myatt's Victoria is an esteemed variety, has monstrous leaves, and under proper cultivation will average two pounds. On the whole, from what we know of this plant, we recommend that the old kinds be rejected, and that cultivators confine themselves to the raising of those the most profitable. We especially recommend the Leviathan, Myatt's Victoria, Dalley's new Scarlet Giant, monstrous leaves, Dalley's Admiral do. do. and the Early Tobolsk, a fine variety, and very early. There may be other varieties equally valuable, but having seen the above in their glory, we noted them down with a view of advising the lovers of this valuable plant, that one root of any of the above kinds is worth more than a half dozen of those ordinarily grown W. R. PRINCE.

Flushing, Feb. 10, 1846.

INDIAN CORN—ROTATION OF CROPS.

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LUTHER TUCKER, ESQ.—I send you the following mode of raising corn and system of rotation of crops, practiced by many of the most successful farmers of this town. The corn crop being mostly depended on, by farmers here, who raise grain for market, it is placed first in the rotation of crops.

A piece of meadow or pasture, that has been in grass three years or more, is usually taken for a piece to plant corn. This is manured, if not too far from the barns, in the fall or spring, before plowing the sward—generally the latter—with unfermented manure. It is plowed only once, care being taken to turn it all over. It is then harrowed once or twice thoroughly, which fits it for the seed, except marking for rows. It is then planted between the 5th and 20th of May—the rows usually 3 feet one way, 2 or 2¼ the other. It is hoed twice, using the cultivator instead of a plow as formerly. As soon as the corn is well glazed, it is cut up at the roots, and put in small stooks, with 25 or 30 hills in each stook.

Most of the farmers think this the best way, as the grain is heavier, and it dries sooner and better. All the stalks are secured by this mode, which are very valuable for wintering stock. Indeed many of our farmers think the fodder from the corn field is equal in value to the hay the field would have produced if in meadow, thereby making the grain almost a nett profit, except the difference in labor of the two crops.

The yield per acre without manure, ranges from 25 to 60 bushels. When manure is applied, 40 to 80 bushels is obtained.

The crop following corn, is generally spring wheat; as the best crops of wheat are obtained by this course. The spring wheat is sown as early in the spring as soil and weather will admit, after the ground is well plowed. The seed is well washed in brine and limed. It is sown at the rate of 1¼ to 2 bushels per acre. Where the land is wet and springy it is plowed well in the fall; then soon as the frost is out of the ground in the spring, the wheat is sown on the ground, without plowing, it only being harrowed thoroughly. This way succeeds well on moist lands, particularly if following a potato crop. The produce of wheat is generally from 15 to 25 bushels the acre.

When three crops are taken off before seeding, which is the case if no manure has been applied, with the most judicious farmers, the wheat crop is followed with oats. The wheat stubble is turned under carefully, in the fall. The oats are sown after one plowing in the spring, at the rate of two to three bushels the acre—ten or twelve quarts of grass seed, with a sprinkling of clover, is sown after the first harrowing, on the acre. The land then remains in meadow or pasture three years or more, as circumstances require. From 30 to 70 bushels of oats is obtained to the acre. As the produce of the crops depends very much on the situation, condition, previous culture, and the amount of manure applied to the soil, therefore this accounts for the large difference in the product of the above crops. G. W. B.

Earlville, N. Y., Feb. 9, 1846.

ANALYSIS OF OATS.

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THE Highland and Agricultural Society of Scotland, offered in the year 1845, a preminm of fifty sovereigns for an analytical examination of oats. The objects to be attained in the examination, were set forth in the following language:

"Little is yet known of the true composition of oats, either in their organic or inorganic parts. The nature of the organic parts, for example, is believed to vary with the kind of soil in which the oat is grown—strong lands, light, and peaty soils, each growing its own peculiar samples from the same seed. The kind of manure, and the season cause similar differences, which become more marked still when different varieties of oats are compared with one another. Again, the inorganic part of the oat varies with the same circumstances of soil, manure, climate, and variety of seed; but it is not known to what extent it varies, either as to quantity or quality.

"The Society offers a premium of Fifty Sovereigns for the analytical examination of the grain of the oat, by which the greatest number of the above points may be ascertained.

"The object of the inquiry is to throw light upon the general value of the oat, and of its different varieties, as a food for man or beast; and upon the mode of culture which in different districts ought to be adopted, in order to raise this or that quality or variety."

It gives us great pleasure to state, that among several competitors, our correspondent and fellow-countryman, Mr. JOHN P. NORTON, received the above-mentioned premium of fifty sovereigns—about $250.

CONVENTION OF NURSERYMEN.

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MR. EDITOR—I noticed in reading the proceedings of the N. Y. State Ag. Society, recently held at Albany, that a committee is to be appointed to report to a future meeting, the names, and to procure drawings of thirty of the best varieties of the apple. In connection with this subject, I would venture to suggest for consideration, the propriety and importance of having a general convention of nurserymen and amateur fruit growers; and that such meeting be held at Auburn during the next State Fair.

Let every nurseryman and fruit grower bring with him, from all parts of the country—not only from this, but from other states—such specimens of fruit as they may possess; and I venture to say that it will add much to the interest of the show, and will undoubtedly be the means of doing much good, and perhaps very materially correct the nomenclature of fruits. I have no doubt but Pennsylvania, Ohio, Michigan, Indiana, Illinois, and Wisconsin, would all be well represented in such convention. The Eastern States I think will not be behind hand in the matter; and even John Bull will be there, and will then talk quite as flippantly about fruits as he does now about Oregon.

I would not wish to be understood as saying that the convention should constitute the committee. By no means. But let such committee meet with and take part in the discussion on fruits in said convention; where very much important information will be elicited from all parts of the country. Information which would be of immense importance to the public at large. Without wishing to assume any authority whatever of calling such convention, I merely fling out these suggestions for consideration. PYRUS.

Buffalo, Feb'y, 1846.

GARDEN OPERATIONS FOR MARCH.

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MR. TUCKER—About the latter part of this month, the first signs of early spring appear in the flowering of the crocuses:

"——————The first gilt thing
That wears the trembling pearls of spring."

This pretty little flower, "that comes before the swallow dares, and takes the winds of March with beauty," is a great favorite of mine. The three earliest sorts of crocuses are the yellow garden crocus, of a deep orange yellow; the cloth of gold, with chocolate stripes; and the Scotch, or white striped. The different shades of blue are the latest. All these, disposed in clumps of a dozen or more bulbs, with snow-drops and blue-bells, give to a garden a very gay appearance.

"Crocuses like drops of gold,
Studded on the deep brown mould;
Snow-drops fair like flakes of snow,
And blue-bells bright now blow."

Of the ornamental shrubs we have the Double flowering Almond, and the Daphne mezereum, frequently in full bloom the last of the month. The flowers come out before the leaves, and grow in clusters all round the shoots of the former year.

"Though leafless, well attired, and thick beset
With blushing wreaths, inverting every spray."

There are two varieties, the white-flowered with yellow berries, and the peach-flowered, with red berries. A stray Pansy, Polyanthus, or a blue flower of the running Myrtle, peeping out from a mass of dark green foliage, sometimes cheer us by their appearance at this early period of vegetation; and among the early bulbs we may enumerate, the spring Crocus, of several varieties, Blue-bells, and Snow-drops; that interesting little flower, that "seems to vie in whiteness with the winding sheet of winter."

"Already now the snow-drop dares appear,
The first pale blossom of the unripened year;
As Flora's breath, by some transforming power,
Had changed an icicle into a flower;
Its name and hue the scentless plant retains,
And winter lingers in its icy veins."

At this season of the year, those gardens composed of evergreens, and the beds and walks edged with dwarf-box, prove to us the value of planting our grounds with trees and shrubs, that retain their leaves. As there is something required to be done in a garden at all seasons of the year, I would recommend the keeping of your flower-beds free from weeds, decayed leaves, &c., as the want of neatness will render the natural aspect of the garden, at this season, still more cheerless. There is also a peculiar pleasure in keeping a garden in order. An old author says: "it tendeth to compose the mind, if it be turmoiled; or affordeth pastime, if it be weary of calmness." The flower-beds should now have their winter covering removed, and the ground should be [illegible] so as to give a neat appearance to the [illegible] should be taken during this operation to avoid injuring bulbous roots, and herbaceous plants yet appearing above ground. Box edging ought to clipped very early in the month, on both sides and the top. Clean and roll gravel walks, and do eve thing in your power to search for and destroy grubs every kind. Shrubs and vines should be pruned the f of the month, before the sap begins to rise. Cut out dead wood and unsightly branches, and head down su as require it in order to form them into handso bushes. Remove all suckers, in order to promote health and improve the appearance of the plant. Fr and forest trees should not be pruned until the last June or the beginning of July. The wound made cutting off the limb in June or July, will heal mu more rapidly than that made at any other time of year. P.

Westchester Co., Feb. 15th, 1846.

VALUABLE VARIETIES OF INDIAN CORN.

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We were much pleased with a variety of twelve-ro ed corn, which we saw at Mr. JEWETT'S, in W bridge, Vermont, last summer, and which we thoug highly superior for a northern latitude. At our sugg tion, Mr. Comstock, of the Albany Agricultural Wa house, wrote to Mr. Jewett for a supply of his corn, seed. Mr. J. sent two varieties, which he describes follows:

"The largest variety I obtained about 13 years in Colchester, in the north part of this state. At eve planting season we have been very careful in selecti the seed from the brightest and earliest ears of corn, uniform in size and color as possible, and thereby h improved the symmetry and quality of the corn.

Jason Stow of this town took one ear from my c which was about one foot in length; this he planted tenth day of June in his garden, and found it all mat in good season for harvest. From this seed for the t succeeding years he planted one entire field on a r intervale soil, near the bank of Otter creek. On acco of yield and soundness of the crops, he prefers it to corn that he has ever cultivated. The seed whic send you is from the product of this ear grown separ from any other variety. It must prove a valuable va ety in the south part of your state, and also in Connec cut and Massachusetts. It is more important that it planted on a rich strong soil than the other vari which I sent you.

"This latter smaller variety is the favorite corn w us, ripening some days earlier, produces equally w by planting the hills nearer together, say, rows 3 by and from 3 to 4 stalks in a hill. Each variety will b two handsome ears to the stalk, when not allowed grow too thick. The husks on the last variety are v thin and soft, they change from green to a yellow v sudden. The corn matures in a short season. obtain of either kind, under good cultivation, fifty bu els to the acre; very free from nubbins or "pig cor most of the ears are of uniform size and quality, w filled out at the end. Either variety cultivated as south as Albany, will change from smaller to a lar stalk and ear in a few years, and may retain most their valuable qualities, if not improved, by selectio seed in the field, taking ears of good uniform size most perfect growth, and those earliest ripe.

"Several years since I procured of E. Jewett of Albans, a small but very early 12 rowed corn, called "Palmer corn;" by intermixing this with the large riety described, and carefully selecting medium ears perfect growth, I obtained the last named variety, whi I have sent you.

"Some may not be aware that corn which is not th roughly dried before winter sets in, or becomes wet, quite moist, and then freezes, is not fit for seed. T freezing kills the vitality of the corn for seed, althou it may look fair."

SOAKING SEEDS.—L. D. (Wilmington, Del.) Y will find the information you ask for in our last volu page 128

HE CULTIVATOR.

ALBANY, MARCH, 1846.

TO CORRESPONDENTS.

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mmunications have been received, since our last, Lea, Geo. Nesbit, Highlander, Rambler, B. e, H. L. Sheldon, H. A. P., Wm. Todd, S. S. ory, N. C. Day, T. D., T. B., W. R. Prince, G. . W., L. Durand, Pyrus, C. Ingalls, K. Haven, Th. , C. H. Parshall, J. S. Yeomans, B. W. R., Noyes ng, S. T. M., A Subscriber, W. B. Hamilton, S. one, G. W. B., C. Babcock, A. Coffin, D., Wm. n, Uncas, E. Holmes, John Brown, N., Little Dele, P., Highlander, R. Burritt, S. B., Geo. Hussey, el Waring, J. Storrs, F. L. E.

We hope "P." will continue his notes on "Garg Operations," through the season—should be glad eive them as early as the middle of each month.

POSTAGE OF THE CULTIVATOR

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ving been informed that several Postmasters, in ent parts of the country, charged *pamphlet* postage The Cultivator," we enclosed our Feb. No. to the master-General, with the request that he would dea to the postage to be charged on it. It will be by his reply, which we annex, that he considers ject to *newspaper* postage only:—

Appointment Office,
Post Office Department, Feb. 14, 1845.

—In reply to your letter of the 10th inst., I have y that "The Cultivator" published at Albany, York, in the form in which it is transmitted for ecision of the Department, is regarded as being t to newspaper postage, only.

I am, sir, respectfully yours,
W. J. BROWN,
Sec'd Ass't. P. M. Gen'l.

ther Tucker, Esq.

MONTHLY NOTICES

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ekly Agricultural Meetings.—These meet- were commenced for the season in this city e evening of the annual meeting of the State ultural Society, and have been continued weekce. At the first meeting a geological map of ate was exhibited by Professor Hall, and some ks were made by him and others on the geologiaracter of the soils of the various districts, and nfluence of the composition of the soil on its proons. Connected in some degree with this subject, interesting remarks were made at a subsequent ng, by Dr. Beekman, in reference to the report committee, (of which Dr. B. was chairman,) aped by the State Society to examine the claims for iums for the best cultivated farms, and in reference o the statistical returns of agricultural products the different counties. At the second meeting the t of manures and their application was taken up scussion, and so *fertile* has been the subject, and *lific* of words has it proved, that for three eve- it has occupied the time. As it is, however, an tant, perhaps the most important subject to the r, we can hardly doubt that the time has been ably spent in its discussion.

wded as our columns are, it is impossible for us nish any reports of these meetings, but shall give brief notices of them as we can find room for.

rrection.—Our printer made a sad blunder in g the illustrations to the article on Transplanting Trees, p. 65 of our last number. Fig. 18 should have been fig. 19, and fig. 19, (which should have been 18,) was given with the *roots* upward, and the top on the ground.

Large Geese.—E. Cheesbro, of Guilderland, brought to this market, in January last, seventeen geese, goslings of 1845, the average dressed weight of which was fourteen pounds. They were a cross of the Bremen and African, sometimes called Poland. He finds this a good stock to rear—hardy and prolific.

Durability of Pine Shingles.—We have been told by Maj. Timothy Cowles, of Farmington, Conn., that the roof of the congregational church in that town was covered with pine shingles in the year 1771, and that they are still perfectly sound, and have never yet let through a drop of water.

G. M. Kassen, of Bethlehem, Ct., counted the kernels produced from two kernels planted, and he found the produce of one 1900, and the other 1960; making all together 3860.

Monthly Strawberries.—Those desiring plants of the new variety of the Strawberry, known as "Stoddard's Seedling," may learn from an advertisement in this number, where they can be obtained. The production of this superior variety is the result of a series of experiments made by Col. J. S. Stoddard, of Palmyra, N. Y. It will be found described in the Cultivator of August last, p. 251, as it developed its extraordinary qualities in the season of bearing.

ANSWERS TO INQUIRIES.

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Aylesbury Ducks.—R., (New-Brunswick, N. J.) We do not know of any of this breed of ducks for sale. The largest breed of ducks we know of in this vicinity, are called Spanish ducks. They are of a bluish gray color, and very large.

Horse-Mill.—A. P., (Washington, Ga.) Sinclair's mill, described in the Cultivator for last year, (page 17,) we should think would answer your purpose. If you wish a machine for working up corn and cob, Pitt's, described in our last vol. p. 324, is a first rate article for the purpose.

Malay Fowls.—O. B. (Castleton, Vt.) The Malay fowls are of all colors, from dull yellow to black. They vary in size; but the largest of them are entitled to the first rank in this respect, and will weigh when dressed from four to six pounds. Occasionally some will weigh more, and capons of this breed have been fattened to the weight of a dozen to fourteen pounds each, dressed. Some of them are coarse and bony, but others, which have been well bred, are not so. The Malay and Java are nearly allied in their characteristics.

Pheasant, or Golden top-Knot.—I. D., (Zanesville, O.) We see no particular objections to a cross of these with the spangled Dorkings. Mr. Cox, of Z., crossed the Pheasant Top-Knot with a large fowl of the Malay character, and the produce were the finest fleshed and best flavored of any chickens we ever saw.

Teeswater Buck.—D., (Kinderhook.) We presume there are no sheep of this breed in this country, and we are not aware that they possess any properties that entitle them to preference over the Leicester or the Cotswold.

Castor Oil.—J. R. D., (Paperville, Tenn.,) wishes to see a full description of the manner of extracting and rectifying this oil. Will not some of our correspondents who are acquainted with the process, furnish this information?

Ascertaining the properties of Cows.—I. D., (Zanesville, O.) The account you allude to, we presume is that of a Frenchman, M. Francis Guenon. A translation of his treatise is published in the Farmers' Library, edited by J. S. Skinner, and published by Greely & McElrath, New-York.

NEW PUBLICATIONS.

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American Journal of Science and Arts.—The number for January, 1846, which is the commencement of a new series of the work, is before us. Its leading article is on three several hurricanes of the American seas, and their relation to the Northers, so called, of the Gulf of Mexico and the Bay of Honduras, with charts illustrating the same, by W. C. Redfield. This is followed by eight other chapters, by able writers, on various subjects of science, and over 150 pages under the head of "Scientific Intelligence," of great interest to the general reader as well as to the man of science. The work is conducted by Professor Silliman, B. Silliman, Jr., and James D. Dana. Published at New Haven, on the first day of every second month—price $5 a year.

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Colman's European Agriculture, Part V.—We have read this part of Mr. Colman's work with much interest and pleasure. It contains considerably more matter of a practical nature than any previous number. It came too late for an extended notice this month, but we shall take it in hand and give a thorough synopsis of it in our next.

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The Pastoral Life and Manufactures of the Ancients:—Comprising the history of Silk, Cotton, Linen, Wool, and other fibrous substances: illustrated by ten engravings on steel: Harper & Brothers, N. York. Our thanks are due the publishers for a copy of this work; but we have not yet had the opportunity of examining it. We shall give it a careful perusal, and furnish a view of its contents, hereafter.

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Address upon Injurious Insects; delivered before the New Haven Horticultural Society and the New Haven County Agricultural Society, by Noyes Darling. This is a highly interesting and valuable address, from which we intend, as we have opportunity, to make extracts. At present, however, we can only notice it briefly. In relation to the cut-worm, that great pest of the farmers' crops in the early part of the season, the following sensible remarks are given by way of remedies. As the time is approaching when the ravages of these insects may be expected, the proposed remedy may be useful;—"On a large scale," says Judge Darling, "sowing salt over the fields, and plowing in the fall have been tried and recommended; but none of these remedies have proved effectual. The best course hitherto pursued for their destruction, is to *dig them out of the earth and give them to the chickens.*" This is best done by going over the garden or field early in the morning, when the plants which have been cut down the preceding night, are easily seen, and the worms may be generally found buried in the earth near their stumps.

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District School Journal.—The editorial management of this work has been assumed by S. S. Randall, Esq., deputy state superintendent of common schools. Mr. R. is well known as a gentleman of distinguished abilities for such an undertaking, and we can hardly doubt that the Journal, under his direction, will be made highly popular and useful.

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Magazine of Horticulture.—The second volume of the new series of this work, commenced on the first of January last. This is the twelfth year of the publication of the Magazine, in which time it has become exensively known, and has doubtless rendered valuable assistance in the advancement of horticultural science. t is edited by C. M. Hovey, and published monthly, at Boston. Three dollars a year.

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Transactions of the Madison Co. Ag. Society. This pamphlet, besides furnishing the doings of this society, for three years, gives an abstract of the census of 1845, and an article on the geology of the county, with a map. The map is taken from the geological map of the state, and it is so colored as to show the portions of the county which are covered by each particular formation; it shows also the manner in which the strata lie, and the manner in which they pass under and are succeeded by each other. This is the first county in the state which has made any attempt to illustrate the geology of the district in connexion with the improvement of agriculture. We deem the example a good one, and hope it will be followed by all our other county societies.

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Medico Chirurgical Review.—We have received the number for January, 1846. This most valuable work is issued quarterly, each number containing 280 pages, at $5 per annum, by R. & G. S. Wood, 261 Pearl street, New-York. It seems eminently deserving the patronage of the medical faculty—indeed any one who has the leisure to read it, could hardly fail to derive therefrom much valuable information.

FAT ANIMALS.

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Our market presented a fine display of beef on the 22d of February. At the stalls of Kirkpatrick & Lagrange, we noticed the carcases of two fine Durhams, bred and fattened by E. P. Prentice, Esq. The first was an ox, five years old, which received one of the premiums of the State Society, at Utica. His live weight was 2,546, and his dressed weight as follows:—

Four quarters,	1,688
Loose Tallow,	260
Hide,	126
Total,	2,074 lbs.

This was a very symmetrical and well-made animal—as handsome an ox, considered in all respects, as we ever saw. His meat was beautiful in appearance—the fat and lean being in due proportions, and well *marbled.*

The next was a Durham cow, five years old, which was put to fattening last fall, in consequence of a tumor on the jaw. Mr. Prentice informs us that she had a calf last season, and was milked till October. Considering these circumstances, her weight and fatness were remarkable. Her live weight was 1,520 lbs., and her dressed weight as follows:—

Four quarters,	950
Loose tallow,	100
Hide,	73
Total,	1,123

At the stalls of Mr. Mahoney, was the carcass of an uncommonly fat ox fatted by James S. Wadsworth, Esq., of Geneseo, and also the carcases of two very fine Hereford steers, bred and fatted by Mr. Sotham, of this city. The Wadsworth ox was seven years old, weighed alive, 2,465 lbs., and dressed as follows:—

Four quarters,	1,686
Loose tallow,	260
Hide,	115
Total,	2,061

This ox was one of a splendid lot of ten fatted by Mr. Wadsworth, and which came on here by railroad, consigned for Boston; but an offer being accepted for this one he was left, and the others passed on. The epicures of the New-England metropolis, are doubtless, before this, luxuriating on superior roast beef. The following are the live weights of the nine which were taken to Boston:—

Two oxen, six years old,	4,865 lbs.
Two steers, three years old,	3,965 "
Two do., four years old,	3,365 "
One single steer,	1,725 "
One do. do. white,	1,790 "
One cow,	1,585 "

The dressed weights of the Hereford steers above mentioned, were;—

No. 1—beef, tallow and hide,	1,200 lbs.
" 2— " " "	1,150 "

The quality of the beef, was, considering their age, four years, very fine—the grain was fine, and the mixture of fat and lean good.

FOREIGN---IMPORTANT.

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The last arrival from England brought the important intelligence that a scheme has been announced in parliament by Sir Robert Peel, for the total repeal of the Corn-Laws. Although it is not proposed that the total repeal shall be immediate, yet it is remarked that the scheme will operate as a repeal, "as it is probable that during this year the duty will not be higher than four shillings per quarter, a comparatively nominal charge." This information cannot fail to be regarded with great interest in this country; but what will be the precise effect of the new measure, must be proved by experience. It seems reasonable that an opening will be made to a considerable extent for some of our agricultural products—especially Indian corn, (if some good way can be devised to secure it from injury during transportation,) and well cured salted provisions. From the article which we give below, it will be seen that free admission is to be allowed to these articles immediately.

It does not appear that any new measure has been proposed for raising the government revenues. The Premier stated in the speech accompanying his proposition, that "such was his confidence in the elasticity of the revenue, that he intended to make no proposition with regard to the income tax; and indeed he hoped there would be no necessity for the imposition of any new tax."

The following is a summary of the new scheme, as given by the London Mark-Lane Express:

1st. A TOTAL REPEAL OF THE CORN-LAWS, after THREE YEARS, with very moderate rates of duty from the present time.

2d. *Free admission immediately* of Foreign Cattle, Maize or Indian Corn, Buck Wheat, Potatoes, Vegetables, Bacon, Beef both fresh and salted, and Pork.

3d. A *Reduction of one-half* in the duties on Foreign Butter, Cheese, hops, Fish and Cider.

4th. A *Reduction* of 3s. 6d. per cwt. in the differential duty on Foreign Free Labor Sugar—reducing the protection on British Plantation Sugar to that amount.

5th. A *Reduction* of the duty on Grass and Clover Seeds to a very small rate.

6th. A *Reduction* of the duty on Foreign Spirits from 22s. 10d. to 15s. per gallon.

7th. A *totol Repeal* of the duties on Foreign Cottons, Woollens, and Linens, with a great reduction on Silks.

8th. A *Reduction of one-half* in the duty on Wrought Clothing, Boots and Shoes, manufactures of Metals, and Carriages.

9th. A *total Repeal* of the duty on Dressed Hides; and a *reduction* of the duties on Foreign Tallow, Soap, and Candles.

10th. A further reduction of the Timber duties.

11th. An alleviation of Highway and County Rates, and an alteration in the Law of Settlement favorable to the Agricultural Districts.

There is to be no increase of the Income Tax.

SUBSOIL PLOWING.

W. B. **Hamilton**, of Philadelpeia, recommends the subsoil plow as a means of guarding crops from injury, either by drouth or wet. In a dry season, he thinks the mellowing of the soil to the depth of eighteen inches, as might be done with this implement, the roots of the plants would penetrate and find moisture, perhaps sufficient to mature the crop, though none should fall from the clouds while it was growing. The advantage, he thinks, would be particularly conspicuous [illegible] soils of a clayey character, with a tenacious subsoil. [illegible] the other hand, he remarks that in a wet season, clayey soils hold water "like a jug," and when saturated and exposed to a hot sun, the plants are "scalded to death." By subsoiling, or, as he expresses it, "by having the bottom of the jug knocked out, the surplus moisture would escape, leaving the soil in a condition [illegible] yield a good return." The land might also, he observes, "be plowed at a time when otherwise it could [illegible] be touched without detriment."

CONDENSED CORRESPONDENCE.

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EXPERIMENTS WITH POTATOES.

G. M. **Kassen**, of Bethlehem, Ct., says—"I have tried several experiments in planting potatoes, and have found the following results. Of the large red kind I planted 10 hills of each sort, which, when digged, weighed as follows:—

	lbs.	oz.
No. 1, large, whole,	56	4
" 2, " two halves,	61	12
" 3, " one-half,	46	12
" 4, very small,	42	8
Another experiment with 5 hills.		
No. 1, large and whole,	26	6
" 2, " two halves,	27	7
" 3, " one-half,	20	3
" 4, very small,	14	7
Of the Scotch greys—5 hills each.		
No. 1, large whole,	21	6
" 2, " two halves,	29	14
" 3, " one-half,	22	10
" 4, very small,	19	2
Another experiment with same kind.		
No. 1, large whole,	16	8
" 2, " two halves,	29	12
" 3, " one-half,	23	4
" 4, " very small,	24	12

It will be observed that there is considerable uniformity in the results of these experiments, viz: the product being always greatest from two halves of a large potato put in a hill, and always least from the small potatoes.

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THE RIGHT SPIRIT.

Mr. **Tucker**—The farmers of Vernon friendly to the cause of agricultural improvement, have formed themselves into an agricultural association. Regular weekly meetings have been held during the winter, which have been well attended. Committees were appointed to confer and report upon the various subjects pertaining to agriculture, which has called out the peculiar views of the several members, together with much profitable discussion. A circulating library is designed to be established, and a routine of useful experiments in farming are to be resorted to the ensuing season. A package of seeds, together with the several reports of the Commissioner of Patents has been received. Above sixty copies of the Cultivator and Genesee Farmer are taken by the farmers, and the right spirit is manifest. The officers of the association are I. S. Hitchcock, Esq., President; N. S. Wright, J. Whipple Jenkins, S. H. Church, and C. Wetmore, Vice-Presidents; H. D. Tuttle, Treasurer; L. T. Marshall, Cor. Sec'y; F. Ingersol, Rec. Sec'y. L. T. M.

Vernon Centre, N. Y. Feb. 9, 1846.

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POTATO DISEASE.

Mr. **Charles Blandy**, of Brownsville, Ohio, writes, "Having planted several lots of various aspect and position, the last year, I have by careful observation come to the conclusion, that the best, if not the only method to raise this desirable esculent, is, to select a high piece of ground, naturally dry, and fully open to the sun; to plant early, and dig as soon as the vine or haulm begins to die; to keep the soil loose and free from weeds of all kinds. By adopting this course, I am almost the only man in this vicinity whose crop was free from rot; although the kind planted by myself and neighbors was the same—the blue-eyed Neshannock, known in New-York as Mercers."

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MISSISSIPPI AGRICULTURE.

Extract of a letter from Dr. M. W. Phi
wards' Depot:—"Our people are impro
improve, and I tell you more than this, t
of cotton and high prices of our necess...—
out in this *my clime* a production that will
f... our market. Pork can be bought che
ern Mississippi than in Cincinnati; hay ca
be bought cheaper than in New-York, [illegible]
Orleans. I have sold an excellent lot

cattle at 2½ cents per lb. I know of a pretty large lot of 2 year old hogs, purchased at $2.50 to $3.00 each—they would weigh 150 to 200 lbs—say 160 lbs. average. I will sell wethers at 5 cents, stalled for two or 3 mo's. I hope to see the day that Mississippi and Louisiana will supply our own people with every necessary, and I glory in being one of Mississippi's citizens who exerts himself in making her thus honorable and independent. I tell you sir, it can be done, and yet send off our 500,000 bales, worth $10,000,000 or more, and I believe, to some extent, it will be done in my day and time."

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CORN PLANTING.

Extract of a letter from **Geo. Blessing**, Frederick county, Md.—"From the scantiness of the corn crop last year, and in many places its almost entire failure, it may not be amiss to look back and try if we cannot detect some cause beside the summer drouth that has been the cause of this scantiness of that valuable grain. I will give you a short sketch of my system of planting corn; not that I wish any person to abandon his system and adopt mine, but I would like to hear from any man who plants his corn as I do mine—if he has ever missed a crop in a dry summer. I can say without the fear of contradiction, that I never have; and the manner in which I plant is simply this:—I prepare my ground well first; then I take the best of seed, and put five or six grains in each hill. This will obviate the necessity of replanting, as I always have plants enough in each hill. As soon as the corn is high enough to run the harrow over it, I do so, and follow the harrow with sufficient hands to uncover and thin the corn, leaving but two stalks in each hill. By dropping five or six grains in a hill, there is always two or three of that number that are as large again as the balance—consequently I have a fine choice of strong plants, that I let stand, and my corn is always regular and strong; whereas, by the old system of dropping two or three grains, the farmer is compelled, if there is a weak stock in a hill, to let it stand, and of course he has short stalks and no corn. I always like to plant directly north and south, as the corn planted in that way will stand the drouth better. I would only say that I cultivate second rate land, and my crop will yield me twenty-five bushels to the acre at least, while many that farm first rate land would get ten bushels to the acre."

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CONNECTICUT IRON WORKS.

Mr. **J. Bingham**, who dates at "Meadow-Bank, Columbia county, N. Y." gives us some information in reference to the iron manufactures of the Housatonic valley, of which we made a brief notice in our last. He states that the amount of ore used at ten establishments, mostly in Salisbury, is 12,080 tons annually; that one dollar per ton is paid to the owners of the mines for the ore taken from them; that the diggers receive $1.50 per ton, which added to price paid for carting, one dollar, makes the ore cost, at the distance of five to six miles, $3.50 per ton, and at the distance of 12 to 14 miles, $4.25 per ton. The beds worked in the southwestern part of Salisbury, have been known for a century. "The iron made from the ore of the old bed in Salisbury," says Mr. Bingham, "is the kind required by the government for the arms made at Springfield, Massachusetts, and Harper's Ferry, Virginia. This iron takes a finer and more beautiful polish than that made from other ore, and is besides excellent for castings. The ores from the other beds are good for almost every purpose but making iron for fire-arms. The *refined* iron from the 'old iron bed' ores, is a beautiful article, and the price reaches not far from $150 per ton. The government contracts require that the iron shall be taken exclusively from this mine.

"Iron and sheep are the principal sources of wealth to the inhabitants of Salisbury. Something near thirty thousand dollars were paid into that town last year for Saxon wool.

"The transportation of the ore is principally done by the farmers. With a team of horses they take away [illegible] loads of a ton each, per day—carrying it five miles. A pair of oxen take one load of twenty-five hundred—sometimes one and a half tons. They might occupy their teams to more real profit, as it seems to me, by staying at home and carting out muck and manure on their lands. It is a poor business that cannot keep a farmer at home, instead of hauling ore five miles at a dollar per ton."

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BLACK SEA WHEAT.

Willetts Keese, of Peru, N. Y., writes:—"I have often heard it said that Black Sea wheat could be grown upon ground so rich that it might fall down without any injury to the grain. I had a fair opportunity of testing it the last season upon my brother's farm. The wheat commenced falling down before it was fully headed, so great was the growth. I came to the conclusion that it would be nearly a total loss; but he has just informed me that the amount was seventy bushels upon two acres. It was a piece of low flat land. Potatoes had grown upon it the previous year without manure. I think it must be a good kind of wheat to sow upon moist rich land. This piece was so badly lodged that it had to be cut with a sickle, which was done by Canadian women, and in as short time as most men would have performed it."

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Several communications, together with a page or two of Condensed Correspondence, omitted for want of room.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, February 19, 1846.

COTTON—New Orleans, per lb., 6½a9½—Alabama 6a9½—Upland, 6a8½.

BUTTER—Prime, per lb., 15a20c.—Common, 9a10c.

CHEESE—Per lb., 7a7½c.

FLOUR—Baltimore, Howard-street, per bbl, $5.12½a $5.25—Richmond City Mills, $6.62½a$6 75

GRAIN—Wheat, (western New-York,) $1.15a$1.25—Rye, 79a 80c.—Corn, northern, 68a70c.—southern, 63a64c.—Barley, 62a 65c.—Oats, northern, 47—southern, 38c.

HEMP—Russia, clean per ton, $195a$200—Manilla $160a$165.

HAMS—Smoked per lb., 7½a7¾ cts.

BEEF—mess, per bbl., $8a$8.50.

LARD—7a8c. per lb.

PORK—Mess, per bbl., $11a$12.50.

TOBACCO—Kentucky, per lb., 3a4c.

WOOL—(Boston prices.) Feb. 21:

Prime or Saxony fleeces, washed per lb..........	40a42	cts.
American full blood fleeces....................	37a38	"
" three-fourths blood fleeces,........	32a33	"
" half blood do	30a31	"
" one-fourth blood and common,....	27a30	"

LIVE STOCK—Brighton Market—Monday, February 16.

At market, 345 Beef Cattle, 4 yokes Working Oxen, 22 Cows and Calves, 1100 sheep, and about 850 Swine. In consequence of the storm, one or two lots of cattle did not arrive at the Market.

Beef Cattle—sales of extra, $6.50; first quality, $6.00; 2d do., $5.25a$5.50; 3d do., $4.25a$5.00.

Working Oxen—Sales not noticed.

Cows and Calves—Dull. Sales noticed at $20, $23, $27, and $33.

Sheep—Sales noticed at $1.75, $2.33 $3.12, and $4.56.

Swine—Dull. Sales not noticed, as there were but few buyers

Dr. O. REYNOLDS' NON-SWARMING AND DIVIDING BEE-HIVE.

THE principles of said Hive are, 1st. Multiplying Colonies by dividing, thereby preventing Swarming. 2d, Removing Honey without injury to the Bees. 3d, Removing old Comb when necessary. 4th, Preventing the depredations of the Moth. 5th, Securing the Bee against the robber.

Rochester, Oct. 21, 1845

This certifies that the N. Y. State Agricultural Society, at its late Annual Fair, awarded a Diploma to Dr. O. Reynolds, of Webster, Monroe county, for the best Bee-Hive exhibited.

DANIEL LEE, *Cor. Secretary.*

[Extract from the proceedings of the Monroe County Agricultural Society, held at Rochester, October, 1845.]

"Dr. Reynolds, of Webster, had a new principled Bee-Hive, with its inmates at work, which, if true in principle, will make a revolution in the manner of treating that very valuable insect. 2 vols. Genesee Farmer.

L. B. LANGWORTHY,
MARCUS ADAMS,
B. F. SMITH."

N. B. The proprietor is desirous of selling territory, or appointing agents. All communications addressed to the Post Master, Webster, Monroe co. N. Y., post paid, will receive attention.

March, 1846. O. REYNOLDS.

ELD-SEEDS AT THE ALB AGRICULTURAL WAREHOU

00 BUSHELS BLACK SEA WHEAT, both red and white varieties.

200	bushels	Italian wheat.
200	"	Marrowfat Peas.
75	"	Black-eyed Peas.
100	"	Canada Peas,
15	"	Emir or Skinless Barley.
150	"	Four rowed Barley.
250	"	Two rowed Barley, (an uncommonly fine mple.)

CORN.

"Large Dutton," 12 rowed ;
"Improved Dutton," 12 rowed, raised by S. W. Jewett, Vt.;
Long 8 rowed yellow ;
Madawasca or early Canada ;
White Flint, (long ears ,)
mall White Flint.

CARROT.

180 lbs. Large white ;
150 " Long Orange.

TURNEPS.

350 lbs. Ruta-baga or Swedish ;
100 " Large English Norfolk;
100 " White flat, or winter.

GRASS SEEDS.

Timothy, best quality,	Orchard Grass,
Northern Red Top,	Southern Red Top,
Large Northern Clover,	Western Medium Clover,
Lucerne or French Clover,	White Dutch Clover.

All the above may be had of best quality, at the Albany Agri-ltural Warehouse and Seed Store, 23 Dean-st.

March 1. E. COMSTOCK & Co.

WORCESTER PLOWS.

UTHER TUCKER, Esq.—Dear Sir—We observe with much surprise, by an advertisement on page 71, of the last No. the Cultivator, that John Mayher & Co. 195 Front-street, New-rk, offer different sizes of " Worcester Patent" Plows, and castings to fit," bearing the same *names* and *marks* as the Worcester Eagle" Plows made by us.

We pronounce the whole thing a *gross imposition*, and calcu-ed to *deceive* the public.

John Mayher & Co. have attempted to pattern from our Plows, d have got up a very *coarse* and *imperfect imitation* of them. e hereby caution the public against such imitations and imposi-ns, as every part of them are very inferior to our manufacture.

We also observe in the January No. of the Cultivator that J. ant, No 5 Burling Slip, New-York, advertises our Eagle ows &c. for sale. *He is not authorized so to do.*

Our *sole* agent for the city of New-York is A. B. ALLEN, 187 ater-st. At his Agricultural Warehouse, the public will find *genuine* Worcester or Eagle Plows, manufactured by us, as ll as a most complete assortment of other Agricultural and rticultural implements of our make.

Respectfully yours,
RUGGLES, NOURSE & MASON,
March 1, 1846. of Boston and Worcester.

STODDARD'S SEEDLING STRAWBERRY.

PANTS of this new seedling may be obtained on the opening of the ensuing spring season, of the original producer, J. S. ODDARD, Palmyra, N. Y. The superiority of this variety of Strawberry, in respect both to quality of fruit and certainty d bountifulness in bearing, has been fully demonstrated by a mber of years trial. Inquirers are referred to an editorial no-e in the Cultivator of August last, p. 251. Plants will be put in a secure manner, and may be sent by express or otherwise almost any part of the country, or to Europe. Price $5 for 50 nts All orders must be accompanied by the cash, (post paid if mail,) and should be addressed to the proprietor as above.

Palmyra, March 1, 1846.

THE PLANTING SEASON.

MMERCIAL GARDEN AND NURSERY OF PARSONS & Co., FLUSHING, NEAR NEW-YORK.

HE proprietors desire to call attention to this extensive esta-blishment, now one of the largest in the union, covering an a of over fifty acres, and compactly planted with every desira- variety of Fruit and Ornamental Trees and Shrubs.

Their FRUIT TREES, they can recommend as being straight d thrifty , of undoubted genuiness. which they ensure by close rsonal attention to propagating from the most reliable sources d from bearing trees ; and also as being, from the well ripened te of the wood, peculiarly adapted for removal to higher lati-les.

To those who are in need of ORNAMENTAL TREES AND IRUBS, they can with confidence recommend their assortment embracing together with the old standard varieties, many new ecies selected personally by the proprietors from the principal rticultural establishments of Europe, whence they are receiv- constant additions.

Orders may be addressed to the proprietors, at Flushing, New-rk, and catalogues can be procured on application to them-ves, to Parsons & Lawrence, 129 Pearl-street, or to A. B. Al-, 187 Water-st., New-York.

Flushing, New-York, 2d mo., 7, 1846—1t.

BUFFALO NURSERY AND HORTICULTURAL GARDEN.

THIS nursery was commenced upwards of twenty-five years ago, and now contains a very large number of the most choice and proved varieties of select fruits : together with a fine collection of ornamental Trees, Flowering Shrubs and Plants.

Individuals wishing to forward Trees to the Western States, will, perhaps, find it to their advantage to purchase here. The stock of choice and select Apple Trees (comprising 1500 of the most noted varieties) is now very large and fine. Prices very moderate.

His descriptive Catalogue, a pamphlet of 40 pages, forwarded gratis, to every applicant. Trees packed in superior order, and forwarded with dispatch. Orders will receive the most prompt attention.

B. HODGE

Buffalo, N. Y., March, 1846.—2t*

QUINCY HALL AGRICULTURAL WAREHOUSE AND SEED STORE,

Over the Market, Boston, by RUGGLES, NOURSE & MASON, Manufacturers, and Dealers, Wholesale and Retail.

AT this extensive warehouse is offered to the farming and planting public and dealers a collection and an assortment of farming and planting tools and seeds adapted to the wants of the different sections of the United States, far exceeding in kinds, quality and amount that of any other similar establishment, and may be called the *American Depot* and *Market* for the sale of agricultural and horticultural implements and machines from the best manufacturers in this country and Europe.

WORCESTER EAGLE PLOWS.

In each year 1842 and 1843 the Agricultural Society of Essex county, Mass, offered Premiums for the best Plows, and instituted full investigation and trials which resulted each year in awarding to RUGGLES. NOURSE & MASON the highest premium. The judging Committee for 1843. in their printed Report. say. " our attention was called to the *quality* of the castings on the Plows of RUGGLES & Co., their *finish* and *durability*. Their appearance is certainly more perfect than any thing we have elsewhere seen. The process of *Chilling* the *Point*, the entire *Edge* of the *Share* and *Flange or Base* of the *Landside*, gives a permanence and durability to the work that renders it of a decidedly superior character," and we think there is no hazard in saying, that the value of the parts thus made is more than doubled by the process."

The following table shows the number of Premiums awarded to competitors contending for the prizes before the several different Societies named, and the number awarded to those who used Plows made by RUGGLLES, NOURSE & MASON.

NAME OF SOCIETY.			Year.	No. of premiums offered.	No. Prems. awarded as above.
Essex	county,	Mass.........	1843	10 premiums	9 premium.
do	do	do.........	1844	8 do	6 do
do	do	do.........	1845	11 do	11 do
Middlesex	do	do.........	1843	8 do	5 do
do	do	do.........	1844	8 do	5 do
do	do	do.........	1845	8 do	6 do
Worcester	do	do.........	1840	9 do	9 do
do	do	do.........	1841	9 do	9 do
do	do	do.........	1842	9 do	9 do
do	do	do.........	1843	12 do	12 do
do	do	do.........	1844	11 do	7 do
do	do	do.........	1845	10 do	8 do
Plymouth	do	do.	1844	6 do	6 do
Bristol	do	do.........	1845	11 do	7 do
Hampden	do	do.........	1844	3 do	2 do
do	do	do.........	1845	6 do	3 do
Berkshire	do	do.........	1845	8 do	7 do
Barnstable	do	do.........	1845	4 do	3 do
Hartford	do	Conn., ...	1845	3 do	2 do
Dutchess	do	N. Y.,.......	1845	2 do	2 do
Windham	do	Vt., ...	1845	4 do	2 do

It is but just to remark that the competition was as much between the plow makers as the plowmen, and in most instances noted, the plows above named were strongly contested by many celebrated plows made in N. England, and that in every case the *first* Premium was awarded to plowmen who performed their work with plows made by RUGGLES, NOURSE & MASON.

The above Plows and *other implements* from the above named establishment may be had at the *Agricultural Warehouses* of A. B. ALLEN, 187 Water-street, New-York; and E. COMSTOCK & Co. 23 Dean-street, Albany, sole agents for New-York and Albany.

Boston and Worcester, March 1st, 1846.—1t

AMES' SHOVELS AND SPADES, by the dozen or retail, at the Albany Ag. Warehouse. E. COMSTOCK & Co

PRINCE'S LINNÆAN BOTANIC GARDEN AND NURSERIES

Flushing, L. I., near New-York.

WM. R. PRINCE & Co., offer for sale their unrivalled collection of Fruit and Ornamental Trees, &c. The entire Fruit Department is carefully scrutinized by them personally, and ingrafted from the largest collection of bearing specimen trees in the Union, and they challenge a comparison in accuracy with any establishment in Europe or America. Purchasers are solicited to inspect their trees and witness their superior size and vigor. The preeminence claimed can be readily tested by sending duplicate orders to them and to any other nursery. They have 3000 extra sized Pears, (on Pear and Quince,) 8 to 12 feet, with heads, very strong and suitable for immediate bearing, and 10,000 Pears, 5 to 8 feet, and 2000 for Dwarfs, or en Quenouille. Also Plums, and Apricots on Plum of the same sizes, and a large stock of the finest Apples, Cherries, and Peaches, the latter very low by the hundred or thousand. 10,000 Quinces 3 to 6 feet. 5,000 Lancashire Gooseberries, assorted. Victoria and other Currants. Fastolfs Franconia, and other Raspberries, at low rates. Of Grapes, the assortment comprises all the most celebrated and *carefully selected* foreign varieties The collection of Roses is the largest in the Union and comprises 70,000 Plants of 1,300 varieties, embracing every novelty that could be selected from ten of the largest collections in Europe, and the plants are much larger than are usually sold. 10.000 Magnolias, 3 to 10 feet; 20,000 Evergreen trees, of every class and size; 50,000 Hawthorns and Privets for hedges; 50,000 large Dutch Asparagus, and 5000 Tobolsk, Victoria, and Leviathian Rhubarb. Of Ornamental Trees, they have above 200,000 of every class and size, including 1000 splendid Paulownia Imperialis. 6 to 8 feet. The purchasers may save two years by the superior size of their trees and shrubbery. Priced Catalogues sent to every post-paid applicant.

March 1, 1846.—2t.

FRUIT TREES.

THE subscriber is ready to receive orders for choice Fruit Treees, viz: Apples, Pears, Plums, Cherries, Peaches, &c. from his Nursery.

Trees all warranted in good condition and true to their sorts.

Also on hand an excellent stock of ornamental Trees and shrubs, green house plants, Roses, Dahlias, &c. &c.

Stock of Peaches and Cherries are particularly large and of beautiful growth.

Orders respectfully solicited, and will receive prompt attention.

Catalogues furnished gratis (if post paid) to all applicants.

Trees packed in the very best manner, and delivered at the Kinderhook steamboat landing or Depot, free of expense.

H. SNYDER

Kinderhook, March 1st, 1846.—1t*

---

100 DOZEN CAST STEEL HOES.

THE subscribers have on hand an elegant assortment of Cast Steel Hoes, highly polished, and finished in the best manner. Among them 50 dozen made by Henry Tower, of Milbury, Mass., of four or five different numbers and prices. Also several other kinds of neck and eye hoes. Merchants and others dealing in hoes are invited to examine them. E. COMSTOCK & Co.

Albany Ag. Warehouse, March 1, 1846.

VALUABLE FARM AND COUNTRY SEAT FOR SALE.

THE subscriber offers for sale the Farm on which he now resides, situate in Southwick, Hampden county, Mass. The road from Hartford to Northampton, via Westfield, along which a mail coach passes daily, and nearly through the centre of the Farm, which contains about 400 acres, nearly half of which is wood land, heavily timbered. It is bounded on one side by the Farmington canal, which renders the communication with New-Haven, an excellent wood market, easy and expeditious. The buildings are a mansion house, with a wing, the latter new, making a front of 70 feet. Also a house for a tenant; three large barns, nearly new, covered with pine and painted; a corn house, carriage house, sheds, &c. Great pains have been taken in selecting and cultivating choice fruit, and there is now on the Farm, in full bearing, a great abundance of the best varieties of apples, cherries, peaches, &c. A part of the land is of superior quality, and on almost every lot is living water.

Tariffville, a larg manufacturing village, seven miles distant, affords a ready market for wood and every kind of produce, raised on a farm. This is one of the most valuable and desirable locations in the country, not only for farming purposes, but for the gentleman of leisure. A large portion of the purchase money, if desired, can remain for a term of years. I will sell the whole together, or in two parts. Letters of inquiry addressed to me, will receive prompt attention, or inquiry can be made of LUTHER TUCKER, Albany, or of R. SHURTLEFF, Springfield.

ROGER S. MOORE.

Southwick, March 1, 1846.—3t

GARDEN SEEDS.

THE subscribers have now on hand a full stock of choice garden seeds, which can be furnished to dealers or to growers and gardeners in any quantity, either in small papers or in large packages. They would solicit especial attention to this branch of their establishment, as they mean at all times to be supplied with the choicest seeds to be had in this country or Europe.

E. COMSTOCK & Co.

Albany Agri. Warehouse, No. 23 Dean-st.

March 1, 1846.

THE MARYLAND AGRICULTURAL IMPLEMENT MANUFACTURING Co., BALTIMORE.

ROBERT SINCLAIR, Jr. & Co., Proprietors.

AT this manufactory is already on hand and for sale—the Maryland *Self Sharpening Plows*, warranted the most perfect in the United States.

Corn and Cob Crushers, Corn Mills,
Endless Chain and Leaver Horse Powers,
Threshing Machines, Corn Shellers,

for hand and horse power.

Cylindrical and Common Straw Cutters.

Also every variety of Cultivating and Sod Plows, Cultivators Harrows and Farming Tools generally. In store

Field and Garden Seeds,

warranted fresh and first quality.

☞ Implement and Seed Catalogues furnished on demand, with prices and description of machines, seeds, trees, &c,

S. & Co.

March 1, 1846.—March and May.

GUANO.

THE subscribers offer for sale, on very accommodating terms, the balance of the ship Shakespeare's cargo, the only direct importation into this port from Ichahoe. Experiments in this country and England prove it to be at least equal, if not superior, to the Peruvian; much Guano from other parts of Africa has been sold as Ichaboe, which on trial has produced unfavorable results. To prevent the loss of Ammonia, this cargo has been put in air tight casks. Apply to E. K. COLLINS & Co.

56 South-street.

New-York, March 1, 1846.—1t

ARE sold at the *Seed and Implement Warehouse* of the subscriber, No. 65 Chestnut-st., Philadelphia.

DAVID LANDRETH.

⁂ Country merchants, and other dealers, will observe that the above seeds are essentially distinct from those obtained by foreign importation, or chance purchase at home, which are at best uncertain. Supplies can be had in bulk, or in retail papers, each bearing the advertiser's label and warranty.

Extract from the "Report" of the Visiting Committee of the Pennsylvania Horticultural Society;" unanimously adopted, and ordered to be printed

"LANDRETH'S NURSERIES AND GARDENS."

"These extensive grounds are on Federal street, near the Arsenal. * * * The earliest collection of Camellias was made here. Some of those now in the possession of those distinguished nursery-men, are ten feet high. * * * The selection of *green house plants* is valuable and extensive. * * *

"The nurseries are all *very correctly managed*, supplying every part of the union, a detail of which would occupy too much of our space; we therefore content ourselves with stating that the stock is very large, and in every stage of growth, consisting of FOREST and ORNAMENTAL TREES, SHRUBS, EVERGREENS, VINES, and CREEPERS, with a collection of herbaceous plants; FRUIT TREES of the best kinds, and most healthy condition; large beds of seedling apples, pears, plums, &c., as stocks for budding and grafting; a plan very superior to that of working upon suckers, which carry with them into the graft all the diseases of the parent stock. * * *

"GARDEN SEEDS of the finest quality have been scattered over the country from these grounds, and may always be depended upon. The seed establishment of these Horticulturists is one of *the most extensive in the Union*, and its reputation is well sustained from year to year.

"To obviate the chance of mixture of the farina of the plants of the same family, they have established another nursery at a suitable distance, so that degeneration cannot take place, and which secures to the purchasers "a genuine article." Knowing thus the age, quality, and process of culture of every plant, the *supply from their grounds is recommended with great confidence*."

⁂ Since the date of the "report" from which the above is abstracted, the *entire establishment* has been *greatly enlarged*. The collection of Camellias embraces all the finer kinds, and consists of some thousands of various sizes; so likewise of Roses and other desirable plants, both tender and hardy, Fruit trees, &c.

The Seed Gardens alone, cover *fifty acres*, and the whole is, as it has been for more than *half a century*, under the successive management of father and son, the *most prominent of its kind in America*.

☞ The Nursery department is conducted by D. LANDRETH & FULTON. Catalogues gratis.

Philadelphia, March 1, 1846.—3t

NEW-YORK AGRICULTURAL WAREHOUSE.

CAUTION.—BEWARE OF COUNTERFEITS.

The only place to find the genuine Eagle and other Plows manufactured by Ruggles, Nourse & Mason, of Worcester, Mass., is at the warehouse of the

SUBSCRIBER, who keeps constantly on hand the best and most complete assortment of Agricultural Implements, Field Seeds, and Fertilizers to be found in the city. A few of the articles he enumerates below, viz:—

Plows.—Cotton, Rice, and Sugar Plows,........ $2 00 to $4.50

Some of these plows are made expressly for light sandy soils, others for a loam or stiff clay, which they work in the best manner. Being made by patent machinery, they are superior to anything of the kind ever before sold in this market.

One-horse plows for the north, with single and double mould-boards. These last are admirable to work in between the rows of root-crops and corn, when not over 3½ feet apart, as they turn the furrow both ways to the crop at once, thus doing double the work of a single mould-board,........................ $3.00 to $5.00

Rice Trenching Plow. This does the same work as the hands, perform on a rice plantation with trenching hoes, and equally as well, and with five times the rapidity that a negro can work. No rice planter should be without them,.......... $6 00 to $6.50

Two and four-horse Plows, of different sizes and for all sorts of soil—stoney, sandy, loam or clay; also for stubble and sward land. Some of these have crane-clevies attached to them, thus enabling the off horse, in plowing a wet meadow, to walk on the solid sward, instead of a miry fresh plowed furrow. Others are adapted to trench plowing, enabling the farmer to turn up virgin earth in a deep soil. These plows are strong enough to grub up bushes with their roots, heavy bogs, &c. They likewise answer for partial ditching, ... $5.00 to $20.00

Paring Plows for shaving off the turf preparatory to burning.. } $15.00

Harrows. A complete assortment of square, triangle, and double triangle folding harrows, with wrought iron or steel pointed teeth. The last are very superior,........... $6.00 to $16 00

Rollers of various kinds, wood, stone, or iron, single or double, and to move by hand or horse power,.......... $16 00 to $65 00

Cultivators, hand or horse, of various patterns,..	3 00 to	8 00
Horse Powers. Endless chain, single horse, ...		85 00
" " two-horse, ...		110 00
" Cast-iron single or two-horse,	50 00 to	60 00
" " four-horse, ...		95 00
Grain Threshers, ... $25 to $40 Beaters,.....	20 00 to	25 00
Thresher with Separators, ...	35 00 to	50 00
Clover Mills,................................	30 00 to	65 00
Fanning Mills, ...	12 00 to	27 00
Burr Stone Mills, for grinding grain, ...	30 00 to	125 00
Cast-iron Mills, a new and most admirable invention They work either by hand or other power, and are well adapted for grinding all kinds of grain, except flouring wheat for market..................................	7 00 to	25 00
Corn and Cob Crushers, for grinding cob in the ear,	30 00 to	35 00
Sugar crushers,..............................	7 50 to	20 00
Paint Mills of various patterns, ...	7 00 to	17 00
Corn-Shellers and Huskers. Will shell from 100 to 200 bushels of ears per hour, in the best manner. These work by horse or other power,..	25 00 to	50 00
The same worked by hand, made of wood or cast-iron, ...	7 00 to	10 00
Vegetable cutters, for slicing up potatoes, beets, turneps, &c.,................................	8 00 to	12 00
Straw Cutters. Common hand kind, ...	3 00 to	8 00
" Hovey's, with spiral blades, ...	10 00 to	30 00
" Stevens' do., cut from one inch to one and one-fourth inches long	10 00 to	15 00
Cornstalk Cutters. Thorn's, Sinclair's, & others,	25 00 to	45 00
Cotton Gins of various patterns, ...	25 00 to	150 00
Ox, Road, or Dirt Scrapers,.....................	4 50 to	5 00
Self-acting Cheese Press, a neat and very superior and simple article,.........................		6 50
Seed Sowers, various patterns,.................	2 50 to	5 00
Horticultural Tool Chests complete,...........		18 00
Wheelbarrows for Gardens,....................		4 50
Common do.,.................................	2 25 to	3 50

Tree or bush pullers, $3 to $5; garden syringes, $3 to $3 50; grain cradles, $3 to $3 50; sausage stuffers, $4.50 to 5.00; lactometers, $2 50; bee-hives, $3 25; ox yokes and bows, $2.50 to $5.00; manure forks, 63 cents to $4.00; hay do., 50 cents to $1; grain and grass scythes, 75 cents to $1.00; swingle trees, $1 to $3.50; hay and straw knives, $1 to $2: axes, Collins', Hunts' and Simmons', handled $1 to $1 50; grubbing hoes, 50 cts. to $1: picks, $1 to $2; trace chains, 75 cts. to $1: budding do.,$1.13; ox chains, American, 12½ cts. per lb; English do., 9 cts.: shovels, 75 cents to $1.50; Spades, do, do.; tree scrapers, 31 to 75 cents.; schuffling hoes, 25 cents to $1; churns, various patterns, $2 to $4; grafting chisels and saw, handled, $2; hoes, all patterns, 25 to 63 cts.; potato hooks, 50 cts to $1.50; do. forks, $1 37 to $2 00; garden reels, 75 cts.: sickles, 37 to 63 cts.: grass shears, $1 25 to $1.50; twig cutters, 50 cts. to $2; vine scissors, 63 cts.; pruning shears, $2; screw wrench, $1.50 to $2 00; sheep shears, 75 cts. to $1.25; strawberry forks, 37 cts,; scythe rifles, rakes, various patterns and various prices; peat knives, $1.50; ox muzzles, 31 to 50 cts. per pair; ox bows, 31 to 50 cts.; hatchets, 50 to 75 cts.; horse brushes, hammers, axe-handles, horse rockets, grindstones, rollers, crank and shafts, flower gatherers, flails, edging knives, cattle tie-chains, bull rings, butter-boxes, bush hooks, caterpillar brushes, fleams, scoops, ox balls, post spoons, garden trowels, spinning-wheel heads, well wheels, oven mouths, budding knives, pruning do.

Castings of all the patterns for New-York and Peekskill plows at 3 to 4 cents per lb.

Worcester do, 5 to 6 cents per lb.

Seeds of the various kinds, for the field only; such as wheat rye, oats, barley, corn, beans, peas, and grass seeds, potatoes, beets, carrots, and parsneps. No garden seeds are kept.

Fertilizers, such as guano, poudrette, lime, plaster, bones.

Agricultural books, a complete assortment

A liberal discount made to dealers.

A. B. ALLEN, 187 Water-street, N. Y

New-York, March, 1, 1846.—1t.

BLACK SEA WHEAT.

THIS wheat has become justly celebrated in northern New-York, and also in Vermont and Canada, having succeeeded admirably during the last ten years. It has not been found liable to rust, and the yield has in many cases much exceeded that of winter wheat. Orders for seed of this and also the Italian wheat, can be filled at the Albany Ag. Warehouse and Seed Store, 23 Dean-st.

E. COMSTOCK & Co.

Feb. 1, 1846. [2]

LINNÆAN BOTANIC GARDEN AND NURSERY,

Late of WILLIAM PRINCE, deceased, Flushing, L. I., near New-York.

THE new proprietors of this ancient and celebrated *Nursery*, known as *Prince's*, and exclusively designated by the above title for nearly fifty years, offers for sale a more extensive variety of FRUIT AND ORNAMENTAL TREES, SHRUBS, VINES, PLANTS, &c., than can be found in any other nursery in the United States, and the *genuineness* of which may be depended upon; and they will unremittingly endeavor to merit the *confidence* and *patronage* of the public, by *integrity* and *liberality* in dealing, and *moderation* in charges.

Descriptive Catalogues, with directions for planting and culture, furnished *gratis*, on *post-paid* application, and orders promptly executed.

WINTER & Co., Proprietors.

Flushing, L. I., Feb. 1, 1846.—2t*[2]

PATENT PREMIUM FAN-MILLS.

I. T. GRANT & Co., still continue to manufacture the celebrated Improved Patent Fan-Mills, at the old stand, Junction, Rens. Co., N. Y. These mills have taken the *first premium* at the following places:—New-York State Fair, at the Institute, New-York, the State Fair, at Pennsylvania, and the State Fair at Maryland. The subscribers have no hesitation in saying that these mills surpass anything of the kind ever offered in market. They are the only mill that has ever been produced that will chaff and screen wheat perfectly clean in one operation.

We also manufacture *Grain Cradles* of the very best quality, which have taken the first premium at the New-York State Fair. They are for sale at factory prices, at the following places:—

A. B. Allen's, 187 Water-st., New-York;
D. L. Clawson's, 191 " "
E. Comstock & Co.'s, Albany;
H. Warren's, Troy; and
Viall & Warren's, Mechanicsville, Saratoga Co., N. Y.

All orders thankfully received and punctually attended to. All goods delivered at Troy, N. Y., free of charge.

I. T. GRANT, &Co., Junction P. O., Rens. Co., N. Y.

Feb. 1—tf [2]

POUDRETTE.

THE Lodi Manufacturing Company have on hand freshly manufactured poudrette, of the first quality, for sale in the city of New-York, at the following prices, viz:

From one to six barrels, inclusive, $2.00 per barrel.
" seven and upwards, " 1.75 "

delivered in New-York, free of cartage and other expense.

At the factory, on the Hackehsack river, where vessels drawing eight feet of water may go, at the rate of $1.63 a barrel, or 33 cents per bushel.

This manure is not only the cheapest and best in use, but also is less dangerous to use than some others. Two barrels or eight bushels will manure an acre of corn. Instructions sent *gratis*, with pamphlet when required. Letters (post-paid) addressed to the Lodi Manufacturing Co., 51 Liberty-st., New-York, enclosing the money, will be immediately attended to, or it may be obtained by application at the office of the company. Feb. 1—4t [2]

THE IMPORTED HORSE CONSTERNATION

WILL serve a limited number of mares this season at his own stables at $20 each. It will be remembered that this horse was imported last June, and took the first premium at the State Fair. He boasts of an illustrious pedigree, is a beautiful brown, and has splendid action.

By Confederate, dam by Figaro, her dam by Waxy. Confederate was bred by Earl Fitzwilliam, got by Comus, by Cervantes, by Sir Peter, by High Flyer, by King Herod, by Flying Childers Figaro, got by Hap Hazard, by Sir Peter, out of Miss Harvey, by Eclipse. See Stud Book.

The owners of fine mares will find it to their interest to have them sent early to the horse. Mares sent to foal will receive every attention, at the ordinary prices for keep.

C. T. ALBOT.

Stokes, Oneida Co., Feb. 1—2t.* [2]

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PLOWS.

FOR list of Plows for sale at the ALBANY AG. WAREHOUSE, 23 Dean st., see Cultivator for Feb, 1846, page 72. Agricultural Implements of all kinds, for sale at the same place.

March 1, 1846. E. COMSTOCK & Co.

"MANHATTAN AGRICULTURAL STORE."

PLOWS manufactured, and plow castings of all kinds made to order at low prices—a general assortment of agricultural machines.

N. B.—Platt's latest Improved Portable Burr Stone Mills of the various sizes, for sale. J. PLANT, No. 5 Burling Slip, N. Y.

FOR SALE.

SEVERAL pairs of WILD TURKIES,—some of which were bred last season from females caught wild in Canada, and a male of wild stock sent from Pennsylvania; and some sent direct from Illinois, in the fall of 1844. Price, *five* to *six dollars* per pair. They are well domesticated. Those who have tried a cross of the wild with the domestic turkey, invariably speak of it as of great value—the cross-bred stock being much more hardy, growing to greater size, and requiring less care and attention than the common variety. Inquire at the CULTIVATOR OFFICE.

March 1, 1846. [2]

BURRALL'S CORN SHELLER.

THE subscribers are now fully supplied with this valuable Sheller so as to be in readiness hereafter to fill orders for any number, without delay. A further trial during the last month has fully established the superiority of this over all other Shellers for hand power. For description, engraving, &c., see Cultivator for February, page 60. Retail price $10, with a liberal discount at wholesale.

E. COMSTOCK & Co.
Albany Agrl. Warehouse.

March 1st, 1846.

"MANHATTAN AGRICULTURAL STORE."

J. PLANT, No. 5 Burling Slip, New-York City.

ORDERS for the *genuine* "Warren Patent (latest) Improved Horse Powers and Threshers," promptly attended to by the sole proprietor, (J. Plant,) viz:—

One Horse Power alone—price, ...	$40 00
Two " " " "	50.00
Four " " " "	75.00

One, two, and four horse Threshers—price, [illegible] [illegible] and [illegible]

Liberal discount to dealers.

SUPERIOR SEED POTATOES.

EARLY JUNE, raised by Prof. Hall, near this city. The best *early* variety known. *Prolific blues*, a new variety, of excellent quality for late keeping, very productive and hardy, not liable to blight or rust. They were produced from the seed or potato ball in Massachusetts a few years since. *Carters*—a very superior variety for the table.

E. COMSTOCK & Co.,
March 1. 23 Dean-street.

ASPARAGUS ROOTS, two years old and of very thrifty growth, for sale by ISAAC ROOSEVELT,

March, 1846.—2t. Pelham, Westchester Co., N. Y.

HUSSEY'S REAPING MACHINES.

WILL be delivered in Baltimore, Md., and Auburn, N. Y., at 100 dollars. They will be made of the best materials, and will embrace all the late improvements. The public prints abound with its recommendations—*all* of which the reaper is warranted by the subscriber to fulfil.

Hussey's Corn and Cob Crusher, lately improved, is warranted by the subscriber to excel on thorough trial, any in use. Price from 25 to 35 dollars. In ordering the above machines, please address the subscriber in Baltimore. OBED HUSSEY.

Baltimore, Dec. 1—4t*

GEDDES' HARROW.

ARRANGEMENTS have been made for a constant supply of these useful and superior Harrows, so that we can hereafter receive orders for them at the same prices they are sold for by the manufacturer. They will be well made, both as to durability and finish, and are considered a very superior article. The State Ag. Society awarded a silver medal for the invention. For an engraving, and full description, from the pen of Mr. Geddes, see Cultivator, 1844, p. 16 A sample may be seen any time at our Ag. Warehouse, 23 Dean-st. Albany, where a full supply will also soon be received. E. COMSTOCK & Co.

DURHAM BULL FOR SALE.

THE subscriber (not having sufficient use for him,) offers for sale his imported, thorough bred Durham Bull, "Prince Albert,"

He is five years old—a roan, of medium size—quiet in temper, and easily managed. For a portrait and description of this bull, see the August number of the Cultivator, and for his pedigree see the British Herd Book, vol. iv., page 382. His sire was the celebrated bull, "Sir Thomas Fairfax."

If not previously sold, he will be will be offered for sale at the next show of the New-York State Agricultural Society.

Letters on the subject may be addressed to the subscriber at Red Hook, Dutchess county, N. Y., where the bull can be seen

Jan. 1, 1846—tf ROBERT DONALDSON.

AGRICULTURAL WAREHOUSE,

By Ezra Whitman, Jr., 55 Light-street, Baltimore.

THE proprietor of this establishment is the sole agent in Baltimore and vicinity, for the sale of the following *new* and valuable improvements, viz:

Whitman's improved Rail-way Horse-Power and Threshing Machine, which threshes and cleans the grain at one operation.

Prouty and Mears' Centre Draft Plow.

" Hovey's Premium Straw Cutter.

I. T. Grant & Co.'s Premium Fan-Mill.

Douglass' Premium Pumps, which are so constructed as to prevent freezing in the coldest of weather.

Rogers' Mill, for cutting and grinding corn stalks.

Together with a general assortment of the *latest* and most *approved* agricultural implements, constantly on hand, and manufactured to order. EZRA WHITMAN.

Baltimore, Nov. 14, 1845.

FARM FOR SALE.

THE subscriber offers for sale the farm upon which he now resides, situate in the village of Auburn, in the county of Cayuga, and containing 100½ acres.

This farm lies upon the south side of Genesee-st., (Auburn,) and is well known as having been the residence of Hon. Nathaniel Garrow, deceased, for many years.

The buildings, fences, and other erections thereon, are ample, and in good repair. The soil will vie with that of any other in western New-York, for fertility, variety, and earliness of vegetation. Great attention has been paid to the selection and cultivation of choice fruits, and there is now upon the farm in full bearing, the choicest varieties of apples, pears, cherries, peaches, plums, grapes, &c., in great abundance.

The farm is well watered by durable springs.

The location is a most desirable one, it being within a few minutes walk of the business part of the village—the churches, post-office, and railroad depot. The Female Seminary is also within a few rods of the dwelling house.

A credit will be given, if desired, for a large portion of the purchase money for a term of years, upon payment of interest annually. Possession given in the spring if required. Enquiries may be made of the subscriber upon the premises, of Luther Tucker, Esq., Editor Cultivator, Albany, or of David Wright, Esq., Auburn. JOHN REMER.

Auburn, Feb. 1, 1846—tf

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. III. ALBANY, APRIL, 1846. No. 4.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

OFFICE IN NEW-YORK CITY, AT

M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY, where single numbers, or complete sets of the back volumes, can always be obtained.

☞ "The Cultivator" is subject to newspaper postage only. ☜

LETTERS FROM MR. HORSFORD.—No. X.

……

VEHICLES OF GERMANY.

Giessen, 1845.

MR. TUCKER—I proceed to redeem my promise concerning the vehicles in this part of Germany.

The Eilwagon, or Diligence, the letter and paper Post, the Familien wagon, or omnibus, the freight wagons, the farm wagons and carts, the barrows, and the carriages, differ scarcely more from each other than from corresponding vehicles with us—in nearly all of which, naturally enough, it may be thought, the superiority is ours.

Every morning at eight o'clock, the walls of all the edifices on Setters-berg* are made to echo the merry notes of the trumpet blown by the driver of a huge oblong, high two roomed, oil-cloth covered establishment, called the Eilwagon. The driver is in a kind of uniform, as indeed is every man holding any station connected with the government. His hat has a little cockade and a gay striped ribbon around. The buttons of his coat with the form of a trumpet, and from his neck, under one arm, is suspended the coiled instrument, from which, with the aid of one or two valves, he succeeds in playing a stirring air, much like that of a bugle. In an apartment immediately below him, is seated the director and two passengers, who look out both forward and on either side. Behind this apartment is another, containing six seats, from which only a window in each door can be enjoyed. All the seats are numbered and taken in the order of payment, as I think I previously mentioned. The two middle ones are furnished with cushions and supports for the head. Behind these six seats is the room for baggage. It does not, however, contain in many instances, the half, most of it being placed on top, and bound down under oil-cloth covers. Children under a certain age are excluded from this conveyance, and under no circumstances can a greater number than eight take places. Four horses, secured by rope tugs, draw this ponderous coach, at a rate, as I have already stated, I think, of about six miles per hour.

The Rothchilds and Bethmans, of Frankfort, have established a letter post between Hamburg, of Northern Germany, and Basle, in Switzerland, that exceeds by much, in the rapidity of its movements, any other conveyance here. The letter bag is carried in a springless, narrow, light, seatless, two-wheeled cart. The driver sits upon the bag, and in this comfortless way, drives his one horse through his stage, at a rate, I judge, from what I have seen, of some eight or ten miles an hour.

Of all the vehicles for transport, none made upon me at first, so deep an impression, as the freight wagons. They are of various sizes, and the least are enormous. As Giessen is situated upon the main route from all the southern valley of the Rhine through Frankfort to Hamburg, a great number necessarily pass here. I think I am safe in supposing it not less than twenty daily. Of one of the largest, drawn by six horses, I estimated, from what I could learn from the driver, that with wagon and freight, he had between six and seven tons. The horses walk as well down as up the moderate inclinations of the McAdam road, and the driver, without reins, accompanies them on foot—apprizing them, and the residents along the road, of his presence by cracking his great whip. To prevent too rapid motion down hill, a break, consisting of scantling, is pressed by a long screw upon the tire of the two hind wheels. This screw is a simple contrivance connected with the axletree, and worked by a long handle like an augur. Under the centre of the load is a long shallow basket laden with provender, and a suit of apparatus for tarring, mending, &c.,—all of which swings at an elevation of some six inches from the ground. This can be conceived when it is recollected that all the roads are McAdamized. A safeguard against ruts is provided in the law taxing the freight wagons. The tax is inversely proportioned to the breadth of the tire. Above, the wagon is thatched, and some of them are not less than seventeen feet high in the middle.

All the old private carriages, remind me of that of Napoleon, now exhibited at Madame Toussaud's, in London. They seem to have been made for war—capable of being shut entirely up—broad and strong. The modern carriages are many of them fine specimens of the art—and several, the property of Dukes, Princes, and some undefined dignitaries, would compare with the best I have seen either in England or America.

Buggies are not quite unknown, but compared with other carriages are scarcely one per cent. In Frankfort there are more.

The ordinary farm wagons are wretchedly constructed, having, with good length of axletree, a narrow bottom, less in width by more than one half, than the length of the axletree. Some of them, such as are used for large loads, have a provision for supporting the rack, or upper part of the vehicle, which accompanies all or nearly all of the freight wagons. It is a vertical rod from the extremity of the axle upwards.

There are many modifications of those thus far enumerated, which I can scarcely point out in such a letter as this, and yet I have alluded to the most prominent of the classes.

Parallel to the Eilwagon there runs an Omnibus,

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* A gentle elevation upon which the Laboratory, Library, Hospital, and a number of modern buildings are erected. Though dignified with the appellation, one needs to be told of its existence, as a visitor does of Constitution Hill, in London, or it would escape recognition.

not so fleet, less commodious, and much less expensive. It evades a government law given to protect the eilwagon establishment, by running separate horses and wagons, from each succeeding station. The farm wagons are for one ox or two oxen—high or low, as the wants of the owner may be. When converted into travelling wagons, seats are suspended from the rack by cords, which contribute not inconsiderably to lessen the effect of the irregularities of the way.

Last of all, there are two classes of vehicles, yes, three, which if neglected, would give no faithful picture of Giessen or Hesse Darmstadt—the wheelbarrows, the baskets and tubs, and the panniers and bags. The latter are the exclusive possession of the donkey-drivers. The baskets and the tubs are employed in the transport of almost everything—water, coal, wood, vegetables from the garden, hay, &c., &c. They are carried on the head, and almost exclusively by females.

Wheelbarrows are most of them upon one model. Exceptions are in the additions which sometimes are employed to bring dog-power into requisition; and this is by no means in a few instances. It is quite amusing to see the faithful little animals leading the way and trailing the burthen, while the owners bearing up the handles and walking easily along, would look much better with the whole freight in charge.

In looking at the whole system of transport here, nothing impresses me more forcibly than the extreme contrast. The gentleman and peasant, the young lady of the town and the peasant girl, in suits of apparel as different as those of the sexes, I had almost said, are yet not more contrasted than dogs, horses, cattle, wagons, and carriages. Here is the result of an effort to engraft the characteristics of modern progress upon feudal repose—a field for study, to which I would gladly devote a measure of time. Yours truly,

E. N. Horsford.

MORGAN HORSES.

Luther Tucker, Esq.—In my letter, published in your January number, I stated that there were but four of the old Justin Morgan horse's colts which were kept as stallions. All of these I have often seen, and I now propose to give you my views of the principal points of difference between them, and of their relative qualities and merits as stock horses.

The Morgan Revenge was foaled in Claremont, N. H. His dam, then owned by one of the Goss family, was a middle sized white mare of no particular blood His color was dark bay and his general form was similar to the others. He had less action than the Woodbury or Sherman, more nearly resembling in that respect the Bulrush, from whom he differed however, in having a shorter gait. He was about 14¼ hands high, and weighed about 1000. He stood nearly all his life in New Hampshire. His colts were generally dark bay or chestnut, and were less celebrated than those of either of the other horses.

The Sherman Morgan was raised by James Sherman, of Lyndon, Vt. His dam was a chestnut colored mare, of rather light bone, said to be of English blood, and long owned by Nicholas Brown, of Providence, R. I. His color was a bright chestnut, with a very hollow back, heavier chested than the Revenge, with a straight lean head, and rather small eye, hairy legs, with good bone and muscle, and great courage and action. He was about 13¼ hands high, and weighed about 950 to 975. In his young days he was kept in the vicinity of Lyndon and Dansville, Vt. After he was bought by Mr. Bellows, of Lancaster, N. H., he stood one season, 1831, at Col. Jaques' Ten Hills Farm, and for the residue of his life was principally kept at Durham, Dover, and other places in the eastern part of New Hampshire. His stock was generally excellent, and their color was most usually bay, chestnut, or sorrel. I believe there are now but three stallions in Vermont sired by him.

The Morgan Bulrush was raised by Mr. Gifford, of Tunbridge, Vt., from a thick heavy dark bay and rather [illegible] mare and was foaled in 1816. His general appearance, shape, and form, correspond with those of the Revenge, but with a heavier chest, longer gait, and more hollow back; in this last respect, more nearly resembling the Sherman Horse. His legs quite hairy, height about 14 hands, and weight about 1000. His style of motion not so good as that of either of the others, but none of them excelled him in endurance. His colts have been almost invariably dark bays, and have generally inherited his peculiar qualities. Many of them have proved very fast, and they have usually made very valuable road horses, though on the average smaller than the stock of either of the others. There are at this time more stallions of his stock than of all the others put together.

The Woodbury or Burbank Morgan was foaled in Tunbridge Vt, also in 1816, from a bay mare said to weigh about 1000, a smart good driver, and then owned by a Mr. White. He was of a bright chestnut color, about 14¼ hands high, weighed from 1000 to 1025, with a heavy and finely curled mane and tail, hairy legs, a large prominent eye, and very broad between the eyes; heavier quartered, and deeper flanked, with less of the sway back than either of the others. In other particulars very similar to them. He was full of nerve and action, and fine courage, was a favorite parade horse, and constantly seen in the muster field, and his gait in harness was not surpassed by either of the others. The color of his stock was most usually bay and chestnut. With the exception of one season in New Hampshire, and one or two of the last years of his life in Keesville, Alabama, where he died, he was kept nearly all the rest of his life in Vermont, and I am of the opinion that it is his branch of the Morgan stock which has mainly contributed to establish the very extensive reputation and celebrity which the Vermont Morgan horses have so justly obtained.

It is a remarkable circumstance that notwithstanding the great diversity of mares through which they have been propagated, the Justin Morgan horse has been able so clearly to impress upon his descendants to the fourth and fifth generation, his own peculiar and valuable characteristics, and it can hardly fail to carry to the minds of those familiar with such subjects the strongest conviction of his thorough bred origin.

It can scarcely be necessary to add that many animals are offered for sale and palmed off upon the unsuspecting as Morgan horses, which have not a particle of genuine Morgan blood flowing in their veins.

Frederick A. Wier.

Walpole, N. H., Feb. 20, 1846.

DEVON CATTLE.

L. Tucker, Esq.—A very erroneous idea exists among many as to the peculiar characteristics of the Devon cattle, and my object in this communication is, if possible, to correct these errors. I believe it is generally conceded that there is not their superior in any of the other improved breeds of cattle, for the road or field; but the general complaint is that they are diminutive in size, and inferior in their milking qualifications—these two, in particular, are the false notions which I wish to eradicate. I do not wish however, to be understood that I consider them as large as some other breeds; but on the other hand do contend that they are sufficiently large for any purpose required by the farmer in this country—and in fact, we think that with a given amount of keeping, they will produce more value of meat than any other breed that we are conversant with.

Perhaps it would not be improper here to state a circumstance that tends in some degree to substantiate this assertion.

On or about the 30th of March last, we had two Devon calves dropped, which we put with one cow, and they ran with her until the first of November. They were then taken from her and put with a considerable number of cattle, and fed pumpkins moderately twice a day until the middle of December, and were then fed a peck and a half of potatoes each, per day, until the 21st of January, when they were killed, and weighed as follows:—One 460 lbs., the other, 509 lbs. making the aggregate weight of the two calves, 969 pounds.

I would also state that the cow did not eat grain of any kind, nor any thing but hay and grass after the calves were put with her, with the exception of a few pumpkins a short time before the calves were taken from her. They are a kind of cattle that mature at an early age, are often ready for the shambles at two years old, and as heavy as our other breeds are at three, with the same keeping; a circumstance which we think of no small consequence to the farmer; for if he can prepare his cattle for market one year sooner by having a different breed, is it not certainly wise that such breed should be chosen? Another advantage to many farmers, in this breed of cattle, is, that they will subsist on coarse fodder, and look well, where, in fact, others would die.

As to their milking qualities, we are aware that they do not produce so great a quantity as others, but are perfectly satisfied that it is more than made up by the superior quality, as tested by the lactometer, and other means. We have in our possession a full-blood North Devon cow, that is now 16 years old, a descendant of the highly esteemed herd of Mr. Patterson, of Baltimore, and which, when well fatted, would not weigh over 600 lbs., that we will venture any reasonable sum can be made to yield 250 lbs. of butter in one year, and have a calf in the time.

Our practice is to let our Devon heifers have calves at two years old, believing that they are as suitable for breeding at this age as most other breeds are at three, but should be well kept.

I do not eulogise this breed for the sake of personal gain, by disposing of stock at a high rate for breeding, as we have none, nor do we expect to have any for this purpose. We dispose of them to the drovers or butchers, at an early age. But our object is to see them widely disseminated through the country, and it is our candid opinion that there is no one breed which comprises so many valuable qualities. I would recommend to all those farmers who do not feel sufficiently able to purchase an entire stock for breeding, to select a few of their best cows, and cross with a Devon bull, and by thus continuing, in a few years will have a fine stock, with nearly all the beautiful characteristics of this profitable breed of cattle.

But how often is it the case that when some farmer has been to the expense of purchasing a superior bull, many of his neighbors will use an inferior animal, because it comes a few cents cheaper. Such men seldom have good stock, and never have an agricultural paper, unless it is a *borrowed* one. To such I would say, abandon this penurious principle, raise good stock, and take at least one agricultural paper. This is one part of the way to become "wealthy and wise."

Unadilla, N. Y., Jan. 27, 1846. S. G. Cone.

KEEPING FARM ACCOUNTS.

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Luther Tucker, Esq.—Your correspondent, E. V. W. Dox, in the January number, p. 20, in giving "an outline of the way in which he keeps his farm accounts," has adopted a very common, and I think, an erroneous practice. He makes no charge for *team* work, in drawing manure or plowing. I see no reason why each number or lot should not be charged every item, as particularly as he would if he were plowing, drawing, or *furnishing* manure for his neighbor. I have noticed several reports of Farm Viewing Committees, and I see that they have pursued a similar course. They make the farm debtor to labor by man and team, seeds, &c., leaving out the manure. And credit it with *all* the produce, including work done off the farm, and then add from one to five per cent. for improvements. If they give the farm credit for 200 bushels of corn and improvements, why not charge it with the manure, which is quite an item in making the corn and improvements.

The course that I have pursued is the same, in numbering each lot, as E. V. W. Dox recommends. But I charge on one page of my Farm Book *all* the labor by man or team, *all* the manure, seeds, ashes, plaster, &c., to each number or lot, and on the opposite page give credit for *all* that it produces. The first of January I strike the balance. In this way I feel that I am doing no more than justice to each lot to add the improvement.

Berlin, Ct., Feb. 21, 1846. F. Roys.

APROPOS OF FARMERS.

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I know a farmer who has but fifteen acres of land, off of which he supports his family—he continues to get 40 bushels wheat from an acre, and from 50 to 70 bushels of Indian corn, besides corn-fodder in abundance; instead of impoverishing his land by these heavy crops, such is his economy in saving, making, and applying his manures, that his farm grows richer. This farmer applies his knowledge of figures to his own calling. He says he cannot afford to grow half a crop, as the deterioration in fences, and the interest of money on the land is the same, crop or a half-crop. It is needless to say that this man takes two agricultural papers.

I know another farmer who has 78 acres of land, a fine calcareous clay loam, ameliorated by quartz and limestone pebbles, with a sprinkling of small boulders. He barely subsists his family, in a very *primitive* way. on the avails of his 78 acres. His corn-field is plowed, or rather half plowed, late in the spring, the weeds run a race with the late planted corn, until late in June, when the hoe and the plow give the stunted plants the end of the race? Now comes a drouth, the already enfeebled plants have no organic pow[illegible] to make the extra heat available; hence they are pinched by that very influence which gives fruition to the well-tended and early-planted field. But the drouth has at least served this man with an excuse for his short crop of Indian corn; thus saving his pride at the expense of his pocket. His wheat fallow is a little better managed than his corn-field, but his crop is always foul, sometimes short, and the grains are generally shrunken. To bring the year about without running into debt, this man pinches his family in the ordinary comforts of civilization; go to his house in a winter's day, ten to one he is asleep on his bed, or sitting cosily by the fire. Ask him to subscribe for an agricultural paper, and he is no longer cosy; all the Goth and Vandal in him is aroused. "I want no book to teach me how to farm. Look at my neighbor Progress, he is a book farmer. What use are his Durhams, and Berkshires, and all his big crops? He spends it all; it only makes his family proud; how mad it makes me to see his children sent by here every day to the village school." I do not retort upon this man the fact, that his district school cannot be respectably sustained, because the district contains too many such men as himself. I let him alone in his glory. I assail no man, who, like the hedgehog, is armed at all points.

I know another farmer, a mild, quiet German, who seems instinctively to have that German love of the beautiful and true, which is only an acquired taste with us restless Americans. While we strain after the ultimate good, they quietly improve that which is within their reach. This man's farm gives an earnest of the industry and good sense of its proprietor. Not a thistle, not a brier, no alder bound fences; all is neat, clean, and arable. The house rather plain; if it displays no taste, neither is it like too many of our fine farm houses, —a caricature on all orders, and good taste to boot. The barn is large, well ventilated, with painted blinds; the fences permanent and strong; what is lacking about these premises in ornament, is amply made up in neatness, and the appearance of positive comfort. This man modestly says, "*Ich can night guth English lezen.*" Still he takes the papers, and the well thumbed leaves of his last year's Cultivator, show that its contents have been understandingly read by him.

I know another farmer, a gentleman, a scholar, and a christian, so far as the fashionable modification of christianity will admit. He complains that he cannot farm by book, because his hired men object to the drudgery of the prescribed preparations. He speaks twice to his horses, where he condescends to speak once to his men. Yet, strange to say, he boasts of the cleverness of his horses, while he complains of the intractability of his men!!

I know yet another farmer, a book farmer if you please, a new beginner, but an enthusiast in his calling. He soon found that he could do nothing by way of improvement, without awakening in the mind of his head man, or factotum, an enthusiasm akin to his own. This man at first demurred to hauling swamp muck into the barn yard, lest it should spoil the manure. Now he has become an ardent student in vegetable economy, and in the philosophy of vegetable growth and nutrition, as it is taught in the agricultural papers of the day. Here is at least one laboring man, exalted from the character of a mercenary drudge, to be a respectable co-worker with the chemist in his laboratory, and on a grander scale. S. W.

Waterloo, Feb. 7, 1846.

REPORT ON FIELD CROPS,

By the Committee of the Addison Co. Ag. Society, Vt.

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Luther Tucker, Esq.—Sir: I send you a concise report of the Committee on Crops for this county, made at our annual meeting, Jan. 28, 1846. It is proper to remark that the drouth has been more severe in this county than was ever known in any previous year. Crops requiring a deep root have come in very light, at best, and many have entirely failed. It is estimated that the yield of hay is about two-thirds of an average crop. Corn, not more than half. Potatoes, half, with the exception of some few instances where the soil was more favorable in a dry year. Peas and buckwheat, one third. All the turnep crops have failed entirely, or so much so that no claims for premiums have been presented.

Wheat, both winter and spring varieties, and oats, have endured the drouth better than any other, especially the Black Sea, which is a spring variety and very hardy. This wheat is a more sure crop with us than any other, and will do well on a great variety of different locations and soils without rust.

Claims presented for Society's premium marked with a star, were not received in season to entitle them to the same, according to the bye-laws.

Winter Wheat, one acre.

1. Rev. Dana Lamb, Bridport, 53½ bushels, $6.
2. Jonas Hemingway, Bridport, 33¼ bushels—$3.
*Alanson Pendleton, Whiting, 55 bushels.
Average product of three acres, 45½ bushels.

Spring Wheat, one acre.

1. Allen Smith, Addison, 51½ bushels—$8.
2. Stephen Holland, Panton, 33 bu. 16 lbs.—$5
3. Jonas Hemingway, 33 bu.—$3.
Dr. Wm. Bass, Middlebury, 31½ bu.
*A. Smith, Addison, 50½ bu.
Average of the five acres, 40 bushels.

Indian Corn, one acre.

1. Jonas Hemingway, 98 bu.—$8.
2. John Grovner, Bridport, 87 bu.—$6.
3. Geo. Spencer, Panton, 62½ bu.—$4.
*Solomon Allen, Panton, 87½ bu.
Average of the four acres, 84 bu.

Oats, two acres.

1. Reuben Sampson, Cornwall, 162 bu.—$4.
2. Charles Howe, Bridport, 131 bu.—$2.
Average of the four acres, 73 bu.

Peas—one acre.

1. John Grovner, 33¾ bu.—$3.
2. Harris Bingham, Cornwall, 26½ bu.—$1.
*Moses Hamilton, Bridport, 36 bu.
Average of the three acres, 32 bu.

Beans—half an acre.

1. George Spener, 18½ bu. $1, gratuity.

Potatoes—one acre.

1. James T. Lane, Cornwall, 385 bu.—$6.
1 John Grovner, 275 bu.—$4
* Harris Bingham, 370 bu.
* Oliver Russell, Shoreham.
Average, 343 bushels per acre.

Sugar Beets—quarter acre.

Rev. Dana Lamb, at the rate of 25¾ tons per acre—gratuity, $1.

Carrots, quarter of an acre.

1. Job Lane, Cornwall, 415 bu.—$3.
2. Q. C. Rich, Shoreham, 283 bu.—$2.
Average per acre, 1396 bu.

Mr. Lamb raises winter wheat after corn and potatoes; sows in September three bushels of seed to the acre. Thinks thick sowing on good ground prevents lateral shoots from springing up, which do not often fill well, and prevents the main stalks from filling as well as they would if the whole ripened off at the same time. Lateral stalks are later in their growth, and do not ripen as early as the main ones. Mr. L. thinks his crop here reported has exhibited abundant proof of his views as here expressed; inasmuch as a part of his field was so dry at the time he sowed it that half the seed perished, and never came up. Here the lateral shoots sprung up, and ripened off several days later than the main branches; whereupon it was found that the yield upon this part of the field was much less than it was where all the heads grew on main stalks.

Remarks by the Committee.—Mr. Lamb has here thrown out some valuable hints, and the committee cheerfully recommends experiments directed to this point. It is believed that lateral stalks in wheat do not usually fill with grain as well as the main stalk, on account of the pollen being shed from the latter before the former are forward enough to receive the best influence from the farina or pollen which is scattered upon the heads and lost upon the laterals of immature growth by those of the main stalk, so as to produce imperfect fertilization in both. It is probably so with all kinds of grain whose blossoms do not yield a sufficient quantity of honey to attract the notice of the honey-bee, and other insects, lovers of honey, so as to transmit the pollen on their legs from the male to the female blossoms, and thus produce pregnancy. It is a well known fact, that wheat standing very thin and scattered, though the heads are large and long, never fills well. Lateral stalks in all kinds of grain where the wind is the only agent to transmit and mingle the pollen, are more liable to fail in perfecting seed; but where honey is yielded in abundance, as in buckwheat, Lateral branches yield well when the season is favorable. So with fruit trees and shrubs. The honey-bee, wasp, and other insects, (lovers of honey,) being attracted by the sweet nectar, perhaps inadvertantly, though providentially, transmit the pollen on their legs and bodies from the male to the female blossoms, thus supplying a deficiency in nature's department, when the wind stands too long in one direction. It is believed this doctrine is well established among the growers of vegetables and fruits in green houses, where the wind and insects are excluded. It is found even, that there are some shrubs that never can yield fruit without the agency of insects, for instance the barberry. The blossom is so peculiarly constructed that the wind has no efficiency, hence the agency of insects as the only means by which the necessary stimulous can be conveyed to the base of the filiament, so as to produce fructification, and ensure fruit.

Allen Smith, Esq., raises spring wheat after corn, potatoes, or oats; plows in the fall; sows one and a half bushels of seed to the acre in the spring, without manure, and harrows well. Soil, black muck, clay subsoil.

The committee regret that the claimants for premiums on corn are not more definite in their specifications. Thick planting answers only on strong land, rows north and south, wide enough for horse and cultivator to pass, and take in the sun. This appears to be the practice of Messrs Hemingway, Allen, Pendleton, Grovner and Spencer. Dr. Bass, and others, at the same time, plant as near the other way as the strength of the land will warrant, and cut up before frost, and stook.

Mr. Harris Bingham raises potatoes after wheat; manures lightly with coarse straw dung from the barnyard; plows in the spring, plants early, hoes twice; uses a compost made of equal parts of plaster, lime, house-ashes, and salt; applies a table spoonful of the compost on each hill at first hoeing. This compost, he says, invigorates and strengthens the stalk, aids it in elaborating the sap, which greatly facilitates the exhalation of the ammonia caused by fermentation in the hill, and prevents rot.

By Committee. It is believed that this is a valuable experiment. We have tried the same the past season with perfect success, with the addition of sowing one and a half bushels of salt to the acre, broadcast over the field when the weather came in hot about the 20th of July. Salt is cooling to the soil, and stimulating to the plants, and this gives health and soundness to the tuber. Moreover, it is believed, so far as this course has been practiced, the potatoes keep better in the cellar.

Mr. Lamb recommends cultivating sugar beets for stock. Cattle and sheep are exceedingly fond of them, and the saccharine matter they contain is proof of their richness. They are raised similarly to carrots, but more easily and profitably.

Mr. Q. C. Rich recommends subsoil plowing for carrots. He uses the common plow in the same furrow after the surface furrow is made. The committee are of the opinion that the subsoil plow is by far a better implement to do this service. The common plow brings too much of the subsoil on the surface. Not so with the subsoil plow. It only loosens the subsoil so as to let down the roots where the land is moist. We have one of these plows, manufactured by D. Prouty & Co., Boston, Mass., which works admirably.

John M. Weeks, for Committee.

CULTURE OF FLAX.

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Mr. Tucker—In a crop of flax every part is valuable, and well directed labor will reap its reward. On the 25th of May, 1845, I sowed three pecks of seed upon an acre of land, which, the year previous was greensward, and produced oats, wheat, and potatoes. The soil was gravelly loam. It was plowed in the fall, and dragged several times in the spring previous to sowing, to destroy the weeds. No manure was applied to it.

From the above ground I obtained fifteen bushels of clean seed, which sold for eight shillings per bushel, and 250 lbs. dressed flax, sold for $7½ per hundred lbs. Footed up it will read as follows:—

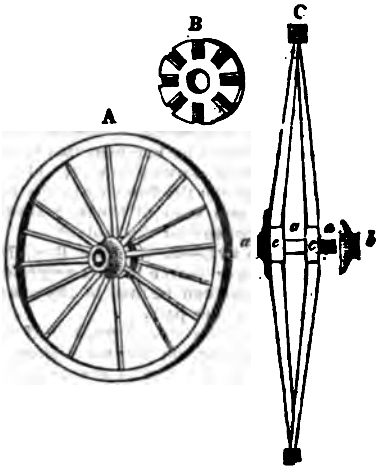
15 bushels seed, ...	$15.00
250 lbs. dressed flax, ...	18.75
	$33.75
Paid for dressing, ...	$6.25
Do. for extra labor, ...	2.00
	$8.25

Then I have left for my own labor and the use of my land, $25.50. Upon ordinary land, without manure or extra tillage, what grain crop would have yielded me more nett profit, with less expenditure of capital. Some get more bushels of seed, and many less. The greater the quantity of seed, as a general rule, the less will be that of flax.

The facilities for harvesting and dressing flax are much greater than in former times. It was once thought to require too much labor to make it profitable; but the existence of labor-saving machinery has induced many to go into it, because it is profitable, and the dread of work is counterbalanced by the large profits it yields.

Will flax grow and seed well year after year on the same land? Does it exhaust the soil more than other crops? What manure is best calculated to impart to the soil that principle which the flax has extracted? If some of your correspondents will answer the above questions, they will do the public a favor, and greatly oblige a farmer. B.

Leyden, N. Y., Feb. 25th, 1846.



SCRIPTURE'S CARRIAGE WHEEL.—(Fig. 38.)

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Description of the Drawing.—A is a perspective elevation ot the wheel entire—B, is a detached, or one-half part of the nave or hub, in which rests the ends of one-half of the spokes—C, is a cross section of the entire wheel, showing the position of the spokes and the separate parts of the hub—*a, a, a*, represent the pipe-box, passing through the two naves, or cheek pieces—*c, c*, having on the inside a connected flange of the same diameter as the naves, and covering the open end of the one next the vehicle, while at the other end a screw thread is cut to receive the screw flange, or front of the hub, represented by *b*, which, by means of a wrench, is screwed firmly upon the pipe box; by which means, the two naves being accurately fitted to the pipe, are made to approach each other, thereby causing the spokes to act as powerful levers, and producing the same effect that is sought to be obtained by resetting the tire of the ordinary wheel, but with the very important difference, that while the one is effected by a considerable expense of time and money, and with a positive injury to the wheel, the same result is brought about in the other by a few minutes application, and without incurring any expense or injuring the wheel.

The advantages claimed for this wheel, are, great economy, consisting in the durability of the hub, which, it is said, "will last for a generation;" and the facility with which it may be kept in order. Ordinary wheels become rim-bound in consequence of inadequate support in the hub; while by this method of constructing wheels, this difficulty is obviated at once, by applying the wrench to the hub and turning it up, more or less, as the case requires.

The inventor and manufacturer is E. S. Scripture, Stapleton, Staten Island, N. Y.

BURNING STRAW FOR MANURE.

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Mr. Editor—I have taken your paper some eight or nine years, but I do not recollect having seen anything about burning straw as manure for a summer-fallow. I have tried the experiment two or three times. The course I have pursued is as follows. I plow my ground the fore part of the season, harrow it down well, and then draw out the old straw that was stacked the year before, and which is quite dry. I spread it six or eight inches thick, as it lies loose on the ground, and it lays a month or six weeks. When I get ready to sow my wheat, I set fire so the straw. The effect produced is equal to a good coat of well-fermented manure. My wheat often turns out at the rate of 35 or 40 bushels per acre. I have tried burning the straw on sandy, gravelly, and clayey soils with good effect.

Now, I ask, what produces the effect described? Is it the ashes, and how do they operate?

E. H. Parshall.

Farmers V'le, Seneca Co. N. Y., Feb., 1846.

ANSWERS TO INQUIRIES.

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Spring Wheat.—"A Farmer," (Stockholm, N. Y.) We should think the Black-Sea would suit the situation you mention best.

Poland Fowls.—W. R. W., (Clark co., O.) Mr. **Bateham**, of the Ohio Culivator, Columbus, can tell you whether these fowls can be had near that city.

Poland and Dorking Fowls.—A. H. M., (Sandusky, O.) We should prefer the Dorking to the Poland, if we wished to keep one kind of fowls, "simply for furnishing eggs and chickens for the table."

Dorkings and Malays.—J. A., (Le Roy, N. Y.) These varieties are rather scarce in this neighborhood just now, but we presume can be had in the course of the season at about $2.50 per pair.

Oats.—A. M. D., (Greene co., Tenn.) "If oats be sown for years in succession, on the same ground, and pastured after heading, by hogs, will the crop and the ground improve?" We cannot tell—if the land was quite natural to oats, and no part of the crop was taken off except what the hogs would pick, it might improve, as there would be a good deal of straw left, and the hogs, while feeding, would leave considerable manure.

Soils that "run" and "bake."—A. M. D. "If you had soil that would run, like melted lead in a wet time, and bake as hard as a brick when dry, what would you do with it?" We confess this question is "too hard" for *ùs*, and must refer it to some one who can speak from experience with such a soil.

Galloway Cattle.—G. W. J., (Milton, N. C.) We know of none of this breed of cattle in the country. There are *polled* or hornless cattle, derived, probably, from different stocks, but they do not show the marks or points of the Galloway. Many of them appear to be a degenerate off-spring of the Suffolks—are sometimes good milkers, but of ugly shape, and are great consumers. The Galloways, are a hardy race, thrifty, and good for fattening, but have not latterly been bred for milk.

Agricultural Chemistry.—S. B. (Orange county, N. Y.) Johnston's Lectures on the applications of Chemistry and Geology to Agriculture would be very suitable for you. The work may be had of Wiley & Putnam, New-York, in one volume, for $1.25, or in two volumes for $1.50.

Rings for Hogs.—Common wire is the material generally used. It may be a sixteenth of an inch in diameter, or somewhat larger. The operation of putting it in the hog's snout is simple enough to those who have seen it, but is not so easily described in a small space. The closer the ring is to the snout, after it is done, the less likely it is to be torn out. A hole is made through the rim of the snout at the most central or pointed part, with an awl, and the wire run through and twisted at the ends so as to form the ring. We have seen a ring made of iron, flattened, something like a horse-shoe nail, with an eye in the head, through which the point was run and clinched. This answers well, and is not likely to tear out.

Lime lo kill wire worms.—"Wayne."—We have witnessed no experiments where a dressing of lime on the soil had resulted in the destruction of these insects. We should like to hear from any one who has proved the efficiency of lime for destroying worms of any kind.

Charcoal.—W. H. T. (Pittsfield, Mass.) No doubt the "fine charcoal made by the engines on our railroads," would be valuable for agricultural purposes; particularly as an obsorbent of urine and the liquids of stables and barn-yards.

Tobacco.—T. A. (Walpole, N. H.) The information you ask for may be found on page 89 of the Cultivator for 1844.

Cheese.—D. R. (Ellisburgh, N. Y.) In the Cultivator for 1844, pages 165, 166, you will find an excellent article in reference to the manufacture of the celebrated English Gloucestershire cheese. In the Cultivator for 1843, pages 114, 129, 147, you will find the details of the management of Mr. Fish, of Herkimer county, N. Y. The queries propounded to dairymen by a committee of the N. Y. State Ag. Society [illegible] undoubtedly [illegible] new and useful facts.

Hay Press.—O. G. W.—Dedrick's press, described in the Cultivator for 1843, page 172, is well recommended. Price $100 to $120. Van Hosen's, described in Cultivator for 1842, page 66, appears to be a good article. The former is, or was made by L. Dedrick, Kinderhook, and the latter by by W. S. Jacks, Catskill.

Plaster—Lime.—W. H. C. L. (Princess Anne C. H., Va.) Plaster is usually applied to corn by scattering it around the stalks when they are from four to six inches high. The best mode of using lime is thought to be, to spread it on the surface and harrow it in before sowing the seed.

Carrots.—J. L. K. (Sing Sing.) We cannot account for the *want of taste* in your horses that they should refuse carrots. We have often fed carrots to horses, and never found any difficulty in inducing them to eat them. We suggest that the carrots be cut in pieces an inch square and mixed with oats, and fed to the horse at first when he is quite hungry. It is only necessary for the horse to fairly taste the carrots, to like them.

Machine for dressing and breaking Flax.—Information is wanted in regard to a machine for dressing flax and hemp, said to have been presented at the exhibition of the American Institute last fall by Mr. **Billings**, of New Hampshire.

Peat and Marl.—W. A. (Yates county, N. Y.) The qualities of peat and marl vary so much, and operate so differently on various soils, that it is impossible to answer your question without knowing more of the circumstances. Your best course is to make trial of a small quantity of it at first in such a way as to demonstrate its value.

Wood Ashes.—H. C. B. (New Lisbon, N. Y.) Ashes generally do best on rather light soils, and are particularly beneficial to grass, clover and grain crops. The difference in the value of leached and unleached ashes is not easily told. The statement of Mr. Crispell, published in our last volume, page 87, indicates that in some cases there is little or no difference. We have often been told that the Long Island farmers consider the leached as good as the unleached, provided they are not used for some time after being leached. Some suppose they attract valuable properties from the atmosphere after coming from the leach-tub. Is it so? and if any, what are the properties acquired? Will chemists tell?

Bones for Manure.—J. L. C. (Zanesville, O.) Bones are used largely in England and Scotland by being dissolved in sulphuric acid. Our correspondent, Mr. Norton, (see last vol., page 266,) states that this mode is by some preferred. Twelve pounds of acid, diluted with once or twice its bulk of water, is used to a bushel of bones. The bones, he says, may be placed on a heap of ashes, and the acid slowly poured over them. The outside of the bone will soon become soft, when they should be turned inside, and in a short time the whole will become soft and fine. From 25 to 30 bushels of bones per acre, is the quantity applied.

Madder Seed.—We cannot tell where this seed may be procured.

Game Fowls.—R. M. (Geneva.) We must refer you to the various English treatises on poultry for the information you want—particularly Boswell, Dickson, and Main. These works could probably be had of Wiley & Putnam, N. Y.

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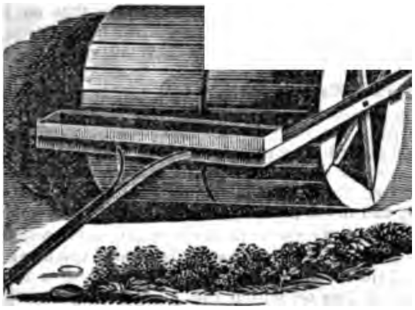
MATERIALS FOR MANURE.

Wm. Todd, of Utica, Md., writes—"I have long been of the opinion that every man who is the owner of an hundred acres of land, (especially if it requires improvement,) ought to keep a man with a yoke of oxen, collecting matters for manure into the barn-yard, for six months in the year. These matters should be leaves, sods (particularly when the grass is long,) from the fence rows, scrapings from the streets or roads, collections from ditches and ponds. He should use sand where the land to be improved is heavy clay, and clay where the land is sandy. No money expended on a farm will pay so well as that laid out in making compost in the barn-yard, where the contents of the stables are collected and made up in one great pile."



USE OF THE ROLLER—(Fig. 31.

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:RE is scarcely a more useful implement of agri-
: than the roller. The purposes effected by it are,
the breaking of clods and lumps on grounds, pre-
ry to sowing or planting; 2d, pressing the earth,
e cases around the newly sown seeds, and at the
ime giving more compactness to too light soils;
oothing the surface of grass grounds,—by which
ion the stools of grass which may have been
by the frost are pressed into the earth, the growth
grass increased, and the surface better fitted for
the.

first of these purposes, is one of great importance;
apprehend that but few, comparatively, of our
s are in the habit of using a roller to effect the
ization of the soil. Taken in a proper state of
re, that is, when the lumps are just softened, but
wet as to pack on being crushed,—the most clod-
d may be brought by the roller and harrow, into
est tilth. It may be observed that the weight of
ller should be proportioned to the tenacity of the

ne construction of the roller, it is now common
plank, making a cylinder of three to four feet in
er. One of this kind is represented in the above
The advantages of this plan are, that the imple-
s drawn with less force, and the pressure is ap-
n a more perpendicular direction. It has been
ed, however, that less pressure is given to the
a roller of large diameter, than one of the same
t of smaller size, because the large one bears on
ter surface. This objection may be easily over-
by having a box attached to the frame, into which
e placed any additional weight required to make
ller effective. Another essential advantage of the
roller, is, that in turning, it does not move the
of soil so much as a small one—thus avoiding
jury of tearing up the sward on grass-lands, or of
ng the seed into bunches and leaving bare spots,
d freshly laid down.

roller is best made in two parts, or with a di-
in the middle, as shown in the cut, so that each
ay revolve by itself. This much facilitates their
g, and obviates the liability of disturbing the sur-
f the ground. The length recommended for the
by Low, and other British authors, is five feet;
have known them to be made six feet in length;
hen divided in the centre, as before mentioned,
ink there is no objection to that length.

FARRIERY.

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. Editor—A farmer of this town has given me
llowing receipt for curing wounds and running
n horses. Take corrosive sublimate and red pre-
e in equal proportions, powdered, and put them
vial. Wind a little tow or a rag on the end of a
wet it and apply it to the wound, touching all parts
he mixture. If a running sore, it should be probed
the wad. He has never had occasion to make
than one application, and has never known it fail.
d a horse which had a swelling on the shoulder, supposed to have been caused by the harness while working on a long sweep horse-power. He had it opened and tried several remedies without success. He tried the above, and in three days the whole matter sloughed out, and it healed in a short time.

I have heard of a new cause of heaves in horses. One subject that died was opened, and on each side of the wind-pipe, where it joins the head, were formed two bags as large as walnuts, filled with pus. Where these lay near the throttle valve, the pipe appeared of an unnatural color. Every other part appeared healthy and sound. Afterwards another horse, which had become worthless on account of the heaves, was killed and opened, and found to be affected in the same way. Afterwards an experiment was tried on another horse, in which the bunches were found. Taking hold of the bunch with a pair of blacksmith's tongs, an iron was held at the under side, and a blow given with a hammer on the upper side. Since that the horse appears to be doing well. But I should think it would be better to open the skin and take out this bag. Farriers may know this disease by another name. B. W. R.

CAN WE TAME MORE OF THEM?

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Mr. Editor:—There is no doubt, I suppose, that all the water fowl that we now have in a domestic state, were obtained from the wild varieties of this or the other continent. They are valuable to us, and the question has often arisen in my mind, cannot more of them be domesticated? There are many species yet to be found in our waters, interesting not only for their valuable qualities for the table, but also on account of the beauty of their plumage, which can probably be domesticated if suitable pains were taken. Mr. Bement, in his work on Poultry, says, experiments are being made with the celebrated canvass back duck, and Dr. Dekay, in his report on the Ornithology of New-York, (a work which does honor both to the Dr. and to the state that employed him,) says that the beautiful wood-duck has been domesticated successfully.

Has the American Swan, (*Cygnus Americanus*,) been domesticated by any one in your state?

Dr. Dekay, in his report, p. 353, says—"In the uninhabitable regions of Hamilton and Herkimer counties in this state, this species, as I was informed by trustworthy hunters, remains during the whole year, where it must necessarily breed. The outlets of Paskunganeh, or Tupper's lake, was specified as a spot to which they were particularly attached." If this be true, it would seem that these birds are not so migratory in their habits as most of the aquatic fowls, and this trait would be favorable to domesticating them. Perhaps some of the people of these counties have already tried the experiment. If so, it would give your readers great pleasure to learn the fact. I think it would be a noble addition to the poultry-yard, as it is a large and showy bird. I may write to you on this subject again, and in the meantime would solicit information through your columns in regard to it. E. Holmes.

Winthrop, (Me.,) Feb. 9, 1846.

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Note.—We have noticed at the Bowling Green, in New-York, several kinds of our wild water-fowl, among which are the Wood Duck, (*Anas sponsa*,) spoken of by Dr. Holmes, the large Dusky, or Black Duck, (*Anas obscura*,) and the Brant Goose, (*Anser bernicla*.) They all appear to be well domesticated, but whether they breed or not, we do not know. We have been told that they and other kinds are domesticated, and are bred on Long Island. The residence of Dr. Dekay is at Oyster Bay, L. I., and we presume he could furnish information as to the breeders of these birds. Respecting the American Swan, we have heard of its being domesticated in several instances. A man in Delaware county, Ohio, succeeded, as we were told, in breeding them for several years. T. H. Hyatt, Esq., of Rochester, informs us that a man in Niagara county, in this state, now has them, but has not yet been able to induce them to breed. We have known no instance in which the canvass-back duck has been tamed, though we heard that a man in the vicinity of New-Orleans had them several years ago. The wood-duck is certainly a most beautiful bird, and we presume is not difficult to domesticate, as we have frequently heard of its being made an inmate of the poultry-yard. The brant goose is also one of the most elegant of all water fowls. In its color, it is somewhat similar to the wild goose, (*Anas canadensis,*) but is more handsome in its shape and general appearance. It is, probably, the least in size of any of the goose family.

FACTS AND OPINIONS,

Condensed from various Exchange Papers.

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Forcing Vegetables by Galvanism.—The Prairie Farmer, (Chicago,) gives the result of his experiments, made by burying a copper plate of about five square feet at one end of his garden, and a zinc one of equal size at the other, connected by copper wires on stakes above ground. Peas, cabbages, beets, carrots, pinks, tomatoes, potatoes, and parsneps, grew between. "Thrice a day they were visited, and various were the squintings, measurings, and comparisons, to make it appear that the galvanized vegetables were outstripping their fellows"—but they showed a most provoking indifference to the experimenter's wishes. The only exception was a row of beets, far larger than the rest—but they happened to be of a different and larger sort, in a thin outside row. The statement winds up with the opinion that a row of toads, at each end of the garden, winking at each other, would be as effectual.

Indian Corn in Southern Europe.—Henry Colman thinks, that should Indian corn be admitted into British ports free of duty, the supplies of the article from the shores of the Medítterranean, would nearly preclude the competition of the United States.

Soiling Cattle in Summer.—Edwin M. Stone, in his Essex Address, says, that an Essex county farmer, by giving his cows freshly cut feed, during a severe drouth and hot weather the past summer, kept the milk of his cows undiminished, and found ample remuneration for the trouble in the extra receipts of his dairy.

Carrots for Hogs.—The great value of carrots for horses and cows, and their superiority for animals to any other root with which we are acquainted, we have sufficiently proved by exprience. A correspondent of the New-England Farmer, however, gives the following statement of their slight value for pigs. "I have no faith in carrots as fatteners of hogs. I have steamed up cartloads upon cartloads, this fall, and fed them to a dozen and a half of hogs and shoats, and it's a man's work to keep them from squeeling."

Pies of Sugar Beets, may be made by grating the beets, and then using them as pumpkins, adding rather more salt and spice. We have eaten pies, which we could not have distinguished from good squash pies, made in this way from carrots. Pumpkin pies made by grating instead of stewing, are quickly made, baking them a little longer, and have more flavor than usual.

Subsoil Plowing.—J. M. Weeks, in the Boston Cultivator, says that in plowing loam, about seven inches deep for the surface soil, and and eight inches deeper for subsoil, the latter was nearly one-fourth easier for the team than the surface plowing. But in clay, where the surface was loosened six inches, and the subsoil eight inches, the latter required nearly one-fourth more strength of team.

Liebig on Potato Rot.—This distinguished chemist states that he has found this year a considerable quantity of vegetable *casein* (cheese) precipitable by acids, not observed in his previous researches. He thinks, from the influence of the weather, or from atmospheric causes, a part of the vegetable albumen, which prevails in the potato, has become converted into vegetable casein; and from the great instability of the latter substance, results the facility with which potatoes containing it undergo putrefaction. He can discover no *solanin* in the diseased tubers, and states that an injury to health from a use of them is out of the question, and that no where in Germany has such an effect been observed.

Cutting Wheat Early.—A correspondent of the London Agricultural Gazette states, that wheat which he cut fully ten days before the usual time, and was laughed at by his neighbors for it at the time, was decidedly superior in quality to that which had been reaped five or six days later. His whole crop was superior, and much prized by bakers and corn dealers.

Depth of Turnep Roots.—Another correspondent of the same paper, says that he has found the fine fibrous roots of the Swedish Turnep (Ruta-baga) five feet below the surface on which the plant was growing, and all around it, a less depth, to a distance of three or four feet. The experiments of Tull, in which he showed the length of turnep roots to be several feet, by the influence of loosened soil upon their growth and size, are familiar to many readers of the Cultivator.

Gigantic Tree.—A correspondent of the London Gardener's Chronicle, states that there was a tree growing in Penang, Straits of Malacca, much visited by strangers, which measured 33 feet round, (about 11 feet in diameter,) six feet above the ground; and at the height of 110 feet, where it threw out its first branches, it measured twenty-seven feet round, (or about 9 feet in diameter.) The surrounding forests were cleared, and the wind prostrated it. It was then measured, and estimated to contain 155 loads of timber. From some of the properties described, it appears to be some species of fig, probably allied to the India rubber.

Potatoes for the Irish.—Professor Lindley estimates that the people of Ireland consume 12,607,500,000 pounds of potatoes per annum, for producing which 804,000 English acres must be under potato cultivation. And that to plant next spring as much land as seems necessary to feed the Irish population, (without exporting as usual,) would consume for seed above 800,000 tons.

Cranberries.—Gen. Chandler stated at a late meeting of the New-York Farmer's Club, that Sullivan Bates, of Bellingham, Mass., raises cranberries in great abundance, by transplanting them from low grounds to high. He plants them in drills, twenty inches apart, and seven inches in the drill. His success was complete. He gathered from one acre about *four hundred bushels* of cranberries in one season. The soil must be such as will not bake. Other gentlemen present corroborated the superiority of upland planting.

Soiling.—T. E. Wallace, in the London Ag. Gazette, says that his cows diminished in milk nearly one-half, by being *stabled* in midsummer, and fed entirely on cut grass. He concludes that however excellent soiling may be, close stabling is highly improper in warm weather. On turning his cows out, they regained their milk.

Rata Tree in New Zealand.—This is at first a parasite, which winds round and encircles large trees, and destroys them; its numerous coils joining and forming a hollow trunk, leaving the victim to rot inside. When full grown it is the monarch of the New Zealand forest, Its form is gnarled and contorted. It is of the myrtle tribe, and bears bright crimson blossoms in such abundance that the whole tree is in a glow; and being abundantly intermingled through the forest, presents a magnificently variegated appearance.

Improper use of Guano.—Another correspondent in the same paper, states that the use of guano has been known to the Jesuits of Upper California, ever since the middle of the last century; and further relates, that after the use of it for several years, the soil becomes rapidly exhausted; so that while under the influence of guano, the crop was in some cases no less than 120 bushels per acre, it afterwards became literally barren. The fertility is partially restored by irrigation, which conveys a deposit to the soil.

Alex. Leeds, St. Joseph's, Mich., says—"The same quantity *saleratus,* in place of *salt-petre,* is far preferable in curing meats, especially beef.

CULTURE OF INDIAN CORN.

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The circumstances most favorable to Indian corn, are a rich, deep, and light soil, with a hot and moderately moist atmosphere.

Keeping in view the principles most congenial to the habits of the plant, we should prefer commencing the cultivation with the soil in a grass or clover sod. The disposition of the manure, if any is used, will next demand attention. The quantity proper to be applied depends on many circumstances—such as the condition of the soil, the whole quantity at the disposal of the farmer, and the requirements of his other crops. The plant will bear a large quantity, if it is intimately mixed with the soil, though the yield is no doubt sometimes lessened in a dry season from too much unfermented manure being used. While the weather is favorable, it induces a large growth of stalk, by which a proportionate degree of moisture is required; but the encouraging stimulus may be counteracted at another part of the season by the tendency of the manure to make the soil more dry than it otherwise would have been. Perhaps as a general rule, it would not be advisable to apply over 30 two-horse loads of long barn-yard manure in one season.

We should prefer that a part of the manure used should be pretty well rotted, and that the other portion should be in a fresher state. The latter we should spread on the sward before plowing, and turn it in with rather a shallow furrow—not exceeding the depth of four inches. The object being to keep the manure near the surface, that it may be the more readily acted on and rendered soluble by air and heat, we should merely cover it sufficiently to prevent loss by exhalation. If the soil should be so compact as to render expedient a deeper loosening than would be made by the common plow, we should use the subsoil-plow, running it in the furrow directly after the other. By using two teams, one following the other, the whole work may be carried along together without any interruption, and in many cases with not more than double the expense of plowing, in the usual mode. The particular advantages of subsoil plowing, it is not intended to discuss here, though it may be remarked that no doubt is entertained of its general utility.

The *time of plowing* must of course depend on the convenience of the farmer. If he has much to do, it is obvious that he cannot plow *all* his land at one time; but we believe experience has established the fact, that the best success has generally been obtained from plowing performed as near as practicable to the time of planting. This result is reasonably explained: the soil is kept in a more friable state through the season; the furrows not being beaten down and run together by heavy rains, as is often the case when the plowing is done earlier. The rotting of the sward takes place most readily when plowed after the grass has considerably started; the sap-vessels being then filled with juices which promote decomposition; and if the seed is planted at the time of plowing, the crop converts to its use, without waste, the gaseous food as fast as it is evolved.

We are aware that certain advantages are claimed for fall and winter plowing; the first of which may be said to be the greater leisure of the farmer at that season of the year; second, the destruction of insects; and third, the benefit of the soil by the action of frost. The first of these positions is undoubtedly correct, and the *convenience* of doing the work at this season, may go far towards counterbalancing some of the disadvantages, and in some cases may justify the practice. How much soundness there may be in the second position, we are not prepared to say. That insects are destroyed from being disturbed by the plow late in the fall or during the winter months, is probable; though it is thought that further and more accurate experiments than have yet been made are required to establish the advantage of fall plowing in this particular. As to the beneficial action of frost, it is admitted that soils of too adhesive a nature, may be so managed that they are thus rendered more open and friable; but to secure this benefit it is necessary to throw them into narrow ridges in such a manner that the water will be quickly thrown off; for it is only by the ground being frozen and thawed while comparatively dry and exposed to the air, that the pulverulent action of the frost takes place. If the surface is left level, the particles of the soil are soon run together by rains; and thus, in sward ground, the subversion of the sod by fall plowing, only produces a greater degree of adhesiveness—increasing the very defect it was designed to remedy. Thus it appears that it is only *too heavy* soils, that can, under any management, be benefitted by fall plowing.

Mode of plowing.—For very light and loose soils, almost any sort of plow or any mode of plowing may answer the purpose; but for compact and tenacious land, much depends on the implement and the manner in which this operation is performed. Several practices prevail in different parts of the country, which seem liable to objections. For instance, fields are often plowed by beginning on the outside and continuing to go round the lot till it is finished. The objections to this mode are several. It occasions inequalities in the surface of the ground, by the manner in which that portion moved by the plow is disposed of—gathering the richer portions into particular places, and making the soil thinner in other spots. Fields have been seen which had been so long plowed in this way that the ground near the fence or on the margin of the field, was raised several feet higher than the general level. In this mode of plowing also, the teams are obliged, in turning at the end of the furrows, to tread more or less on the plowed ground, so that there is a hard beaten strip of eight or ten feet in width on those portions of the lot where the furrows made in one direction end, and others commence. The soil also becomes thin at these places—the action of a plow at the beginning of a furrow, always throwing the earth a little forward; so that by the tread of the team and the gradual removal of the soil, these spots become at length comparatively barren.

A better mode of plowing is to commence by striking a furrow about a rod from the fence, on all sides of the lot, and then plow the field in "lands,"—completing the work by plowing the outside strip; in doing which the furrows should be commenced next the plowed portion—the team passing round the lot and turning to the right till the work is done.

Other defects in plowing are, leaving portions of the soil between the furrows uncut and undisturbed, and also turning too wide furrows. The bad consequences of these practices are not so evident nor indeed so great on light sandy or gravelly land; but it will be admitted that the *best* plowing is that which approaches nearest to spade husbandry, and this can only be gained by an intimate division of the soil. Without laying down any specific rule for the width of furrows, it may be observed, that the heavier and more compact the soil, the finer it should be cut by the plow, in order to fully secure the object designed. It is the practice of some of the most judicious farmers, not to plow a wider furrow than ten inches, on soils of medium stiffness.

In plowing *sward* especially, the circumstances which favor decomposition, should be duly regarded. Science teaches, and practice and observation prove, that the action of heat and air is essential in effecting changes of animal and vegetable bodies. This important principle should be kept constantly in mind, and the inferences deducible from it, should direct to a proper performance of the work under consideration. The furrows should be laid lightly—being so disposed by the plow as to admit the access of air to the under side. If they are very wide, or are turned over too "dead," as it is sometimes expressed, they will press more closely on the subsoil, and the decomposition will go on but slowly—indeed in wet and cold lands it will scarcely take place at all.

Another advantage resulting from leaving the furrows as here mentioned, is the opportunity afforded for the escape of surplus water. This is in many cases of great consequence, for though a certain degree of moisture is favorable to decomposition, and to vegetable growth, yet is well known that an excess is injurious.

Considerable controversy has at various times been carried on in regard to the relative advantages of "flat" and "angular" furrows. The objections to flat furrows, seem however, to be much less in cases where the subsoil plow is used, and on porous soils, than under other circumstances. In the management of grass-land, it is the practice in some sections to plow them up when the grass declines in quantity, and sow the inverted sward immediately with grass-seed. For this object the ground must be rendered sufficiently smooth to give a good bottom for the scythe, and for this it is necessary that the furrows should be considerably flat. The advocates of both these modes of plowing, however, generally agree in regard to one important requisite; that is the complete and effectual covering of all vegetation. If the grass is allowed to project between the furrows, it will grow, and not only prevent the sward from rotting, but will obstruct cultivation and injure the crop. There are, it is true, comparatively but few plows that are capable of performing, perfectly, the operation required; nevertheless there are some such, and the farmer would greatly promote his interest by using them.

Management after plowing.—In a preceding portion of this article, it was mentioned, that for the corn crop, a portion of the manure would be preferred in a rotten state. In this latitude, to which special allusion was made in this particular, the season of vegetation is at best but just long enough to fully mature the crop. It becomes then a matter of the first consideration to induce a rapid growth of the plant from the first start, in order that its maturity may be rendered certain. This, in fact, is the grand point, for if it is not gained, the labors of cultivation are performed in vain. The vegetable nutriment of manures is not available till decomposition commences; hence green or long manures cannot afford the plant in its early stages, the support which it requires; sustenance must therefore be provided from which it can be fed and nourished immediately. The rotted manure supplies this requisite. It should be spread on the surface after plowing, and harrowed in with a light sharp harrow. If the quantity applied is small, the benefit would probably be greater by depositing it in the row or hill. By using the rotted manure on the surface and covering the other, as mentioned, the whole food of the crop is so disposed as to afford a regular supply in the ratio required by the increasing growth. At first the plant feeds on the old manure, and while that is becoming exhausted, the long manure and the vegetable matter of the sod are brought to a soluble state, and as the roots are extended an abundant pabulum of nourishment is obtained. The *exclusive* use of thoroughly rotted manure for Indian corn is not advisable—its action is not sufficiently lasting—it will throw the crop forward early, and make plenty of stalk, but is liable to become exhausted before the grain is formed. This is often the case with poudrette—it has in many cases proved insufficient to make a crop of corn without other manures, such as barnyard dung, or a decomposing sod. Used in connexion with these substances, its benefit, when properly prepared, is undoubted.

Mode of planting.—The distance between the rows or hills, number of stalks to the hill, &c., must be determined principally by the character of the variety cultivated. The different kinds require space according to the size and height to which they are inclined to grow. The smaller the kind, the closer may be the planting. If planted thickly, considerable advantage will be gained by allowing the greatest space to rows running north and south, as freer access to the light and heat of the sun is thus afforded. In drill planting, the medium sized varieties usually cultivated in this latitude, (42½ degrees,) require a space of three feet between the rows, and with this space one kernel may be allowed to every foot in the row, for a permanent stand. If land is very weedy, there is an advantage in planting so that the corn can be worked both ways; but to render this convenient, a less space than two and a half feet the narrowest way, would not be advisable, and three stalks might be allowed to a hill

In the *selection of varieties* reference should be had to quality of soil as well to the nature of the climate. A variety inclined to produce large stalks should by no means be put on thin land; for the food of the crop might be so much exhausted in producing the stalk that the ear might fail for want of nourishment. A larger variety, however, than it would be wise to plant, on thin land, may be profitably placed on that which is rich; but whether the kind chosen be large or small, or calculated for rich or poor soil, it should be regarded as important that it have as little stalk and cob as possible in proportion to the size of the ear and the quantity of corn. A small cob, especially at the *butt*, is of much consequence. In this latitude, as before remarked, the ripening of corn is rather precarious, and a difference of only a few days in the maturing or drying of the grain, may seriously affect the value of the crop. Every one may have observed that the ears with a large cob and large butt, retain moisture and remain in a green state longer than those of an opposite description. This retention of moisture renders the corn liable to injury by moulding in the crib, or when standing in shocks, and also by the cob being frozen while in this state. The latter effect may be frequently noticed; on those ears which have been frozen while the cob was filled with sap or juice, the cob and the "chit" of the corn will be found black, and the kernel has in many cases lost its germinating power.

To provide against contingences, (destruction by worms, birds, &c.,) it is proper to plant an extra number of kernels. After the corn has attained the height of six or eight inches and is out of danger, the supernumeraries may be pulled up, leaving only the desired number of stalks.

The *proper depth of covering* in planting corn, depends on the nature and dryness of the soils. The depth of an inch on some soils would be equal to several inches on others. A deeper covering than is actually necessary to produce healthy germination, is prejudicial to the growth of the plant, and considering all circumstances, there are but few cases where it would be advisable to cover corn more than two inches, and in very moist soils, a covering of only an inch would be preferred.

If the ground has been well prepared, and is free from stones, the corn may be well planted with a machine. Lewis' "Seed Planter" will perform well in such cases, and make a great saving of labor.

Time of planting.—The condition of the soil as to warmth and moisture, and the general forwardness of vegetation, must regulate the time of planting. From the variation of the seasons it is obvious that no particular *day* can be fixed on for this work. The rule said to have been followed by the Indians,—from whom we first obtained and learned the uses of this valuable esculent—was to plant when the leaves of the white oak had so far advanced as to show the form of a crow's foot. The ground has then acquired a good degree of warmth, germination is quick, and the growth rapid.

Culture of the crop while growing. The first object should be to keep the ground light, and the crop clean from weeds. On light soils, the harrow and cultivator may accomplish this without much aid from the hoe; but operations must be commenced with one of these implements, (the harrow is perhaps preferable at first,) as soon as the corn appears above ground; and so frequently should the work be repeated as to allow no time for the weeds to start.

On soils which have a tendency to become too compact, tools must be used which will penetrate the ground to a considerable depth. It is the class of soils which bake under the action of the sun, that suffer most from drouth, and the crop can in no way be so well protected against injury from this cause, as by frequent stirring and loosening the soil, by which the tendency to become too solid is counteracted. An implement with teeth like a plow coulter, two or three in a frame, answers this purpose well. While the corn is small, it may be run very close to the stalks without injury, but as the size of the plant increases, and the roots extend, the implement must not run so near. In some sections, what is called a shovel plow is used, and when properly made, it is an excellent tool. The wings of the share should not be too widely spread, as this throws the ground too much into ridges; it should be calculated to cut or stir the ground without moving it much to the right or left. A good plow of this kind loosens the soil much more effectively than a common plow, leaves it lighter, and not thrown into ridges. Besides the objection of too much ridging the ground, the common plow leaves the substratum even heavier than it was before, instead of making it loose and light.

For any ground on which it is proper to raise Indian corn, level cultivation is decidedly preferred. It exposes less surface to be dried by the sun and air, more readily receives and retains moisture, permits the extension of the roots over the whole soil by which the plant is better nourished, and better strengthened against the force of winds. When ground is thrown into sharp ridges, as is done by the plow, many of the horizontal roots are scorched by the sun, and are necessarily so short as to afford the plant but little support as braces.

In cultivating sward, the sod ought not to be turned up the first season. The tools mentioned will sufficiently loosen the soil without bringing the grass to the surface, and the gases evolved by decomposition are not wasted in the air, but are taken up by the growing crop.

In the early stages of the growth of the crop, the soil can hardly be tilled too much. To keep down the weeds, which should be the primary object, some of the implements of culture should be often passed through the soil, till the crop becomes so large as to obtain full possession of the ground.

Harvesting.—The fact is well established that the aggregate value of the corn-crop is greatest, when it is cut and properly cured in shock. The only objection to the practice is the difficulty sometimes experienced in drying. It sometimes happens that there is an unusual prevalence of wet weather immediately after cutting up the crop, which induces mouldiness in the grain and injures the fodder. Some varieties of corn are also cured with more difficulty in this way than others. This objection applies to those kinds in which the ears are produced close to the ground, and which have besides a large number of short suckers and leaves, that prevent the circulation of the air and hold the dampness.

Care should be taken that the shocks are not made too large, and that they are set as openly as possible at bottom. It may be observed, however, that with the tall varieties cultivated at the south and west, these precautions are hardly necessary. If the corn is rather green when cut, it is a good mode to make but a part of the shocks at a time, leaving a sufficient number of rows to make the shocks of the desired size; and when the first is sufficiently dried, the remainder is cut and added. The shocks should stand to dry for a few days, if the weather will permit, before they are bound. In binding, the band should be placed as near the top of the shock as practicable, both for the better shedding of rain and allowing the shock to remain more open to the air.

The fodder of corn when well cured in this manner, is an excellent article for feeding cows or other stock in winter. An acre of stout corn is considered equal to an acre of good grass, in the value it affords in stock-feeding, exclusive of the grain.

ARTESIAN WELLS.

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Mr. Tucker—Can you give us any information on the subject of Artesian wells? We have large tracts of land in our region of country which are destitute of running water, particularly in a dry season, which inconvenience I believe will at some future time be remedied by bringing water to the surface of the ground by boring. In digging wells in this vicinity, after passing through the soil and a subsoil, usually of a clayey loam, we usually come to a bed of blue clay between ten and twenty feet from the surface in which is found more or less gravel, pebbles, and occasionally a small boulder of granular quartz or hornblende; this bed varies in thickness from ten to fifty feet, rarely less than about twenty. A bed of quick sand filled with water, is usually found after passing the blue clay, and in many instances the water rises several feet from the fountain found in the quick-sand, while in some it does not rise at all. In no instance have I heard of a rock stratum being discovered in digging. In many instances, after digging several feet in the blue clay, the experiment of boring down to the quick-sand has been tried with success, and in others it failed of obtaining a supply of water. Now if some one practically acquainted with the necessary implements and all the manipulations in prosecuting the work of boring for water, in a country the features of whose geological formation resemble ours, we shall be highly gratified to receive a *full report* from him.

The principal difficulty in the work, will, as I apprehend, be in passing through beds of quick-sand. I am full in the faith that water may, in most instances in this vicinity, be made to rise above the surface by boring not to exceed three hundred feet.

Yours, &c., C. Bryant.

Princeton, Bureau Co., Ill., Jan., 1846.

We should be pleased to receive information in relation to the subject of the above communication.—Ed.

SEED CORN.

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John S. Yeomans, Columbia, Ct., gives an account of of some experiments he has made in selecting seed-corn. He sums up the conclusions to which he arrives as follows:

"1. That there is a tendency in corn to degenerate—that a variety after having been planted for a series of years, is not likely to ear well or to fill out on the ear, though the stalk may be luxuriant.

"2d. That an early variety, taken from a higher latitude and cultivated here, will increase in the size of the ears, be more prolific in grain, with a less quantity of stalks."

Mr. Yeomans says his principal object in this communication "is to impress upon the minds of agriculturists, the importance of occasionally changing their seed corn." In reference to this, we remark that we should observe the same rule in changing "seed corn" that we would in changing the breed of any live stock—that is, if that which is better can be had, change and get it, but not otherwise. We would not however discourage a trial which need not involve much risk, in order to ascertain whether a real improvement would be made by adopting a change. That a variety of corn, or any plant, has actually "a tendency to degenerate" in consequence merely of being cultivated "for a series of years" in the same neighborhood or district, we cannot believe. It is true a variety of corn may be chosen which is not adapted to the soil and climate—it may be a larger variety than is proper for a thin soil, or it may require a longer season than belongs to the locality—nevertheless, if any portion of it should ripen, and a judicious selection be made for seed, each succeeding crop will be better and better fitted to the situation—it becomes acclimated. Instances are not wanting to show that every kind of grain or vegetable may be greatly improved by selecting from year to year the best specimens for seed. As to bringing corn from the north, we should decidedly prefer that, to taking it from the south.

GIVING AGRICULTURAL PAPERS.

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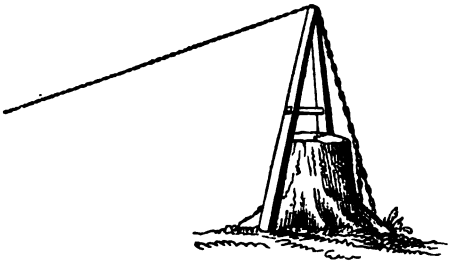
The Chittenden Agricultural Society (Vt.) has adopted the plan of giving each member of the society an agricultural paper. The president of this society, L. G. Bingham, Esq., writes in reference to this plan as follows:—"Our new plan of giving an agricultural paper to every subscriber to our society in this county, works admirably, and more than doubles the number of our members."



STUMP MACHINE.—(Fig.34.)

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L. Tucker, Esq.—The above cut represents a very cheap and efficient stump machine, in use here, which consists of two pieces of hard timber, six inches square by two feet in length, firmly fastened at the top, with a strong band of iron; and cross-piece in the middle, in the shape of a three cornered drag, which is to be set astride the stump, with a strong chain fastened to the top of the machine, and to a root on the back side of the stump from the cattle. A common sized 18 feet chain will answer to hitch the cattle with. Two yoke of cattle will pull almost any common stump that has been cut from three to five years. It is not to be supposed that it will pull every pine or oak stump that it may be hitched to, but it is believed to be the cheapest and best kind for clearing old fields of stumps to be found.

It would be well to have the lower ends as broad and flat as convenient, to keep it from sinking in the ground.

West Hill Creek, Pa., Feb. 3, 1846. G. N.

EXPERIMENTS, SUGGESTIONS, AND QUESTIONS

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Mr. Editor—It has been thought that the knowledge which goes to constitute good and bad farmers, may in different ways be compared to the materials—such as timbers, boards, shingles, nails, &c.,—with which convenient and inconvenient houses are constructed. Some farmers with much knowledge, are good farmers; while others, with much knowledge, are poor farmers, as they lack the ability to rightly apply their knowledge. Some houses, constructed of many materials, are convenient; while others, consisting of as many materials, poorly put together, are inconvenient. The comparison also holds good between farmers with little knowledge, and houses constructed of few materials. And, if in offering the following variety, some of your agricultural readers should be supplied with a needed timber, a board, or perchance a few shingles or nails, the time spent in furnishing them will not be spent in vain. Possibly some of the following observations may tend to prevent a timber or a board being placed in a wrong position, or assist in clinching a hinge or a nail.

In a former number of "The Cultivator," the idea has been advanced, that it is possible that substances hurtful to the growth of plants, may be taken up through their roots; and in another number salt is recommended to be applied to the roots of plum trees. To corroborate this first sentiment, and to prevent an overdose of salt being applied to fruit trees, the following case is stated as being well known to have happened in this place. A barrel containing brine was placed under a cherry tree, and either by leaking out or being spilt, a part of the brine got down among the roots of the tree; and the consequence was, that the leaves withered some weeks before the usual time for leaves to wither, and the cherries were much smaller than usual, and so salt as not to be fit to be eaten.

The relative fitness of large and small potatoes for seed appears to be a subject of doubt with many farmers; and the same may be said with regard to whole potatoes, and those that are cut. This seems to be the case notwithstanding many experiments have been made to get at the truth of the subject. While the following experiment is stated with the hope it may throw some light on a doubtful subject; it is also proper to observe, that in respect to the different modes of rearing potatoes, the statement that "circumstances alter cases," is very appropriately applied; especially, as some potatoes have more and larger tops than others; and as the tendency to grow large (whether the seed is large or small, cut or uncut,) is much stronger with some varieties, than it is with others.

In 1835, the eyes (cut small) from three bushels and twenty quarts of potatoes were planted as an experiment with one bushel thirteen quarts of whole ones. They were planted in drills in the following manner. First, three rows with eyes, then a row with whole ones, and so on. The eyes were planted much nearer each other than the whole ones. In planting, hoeing, and in digging the crop, it required full double the work for a row with eyes, that was required for a row with whole ones; and while the four rows planted with whole potatoes yielded fourteen bushels, the twelve rows planted with eyes, yielded twenty-two bushels. It is not distinctly recollected by the writer, as to what variety was used for seed; but he believes that with respect to size, and the number of stalks to each, they nearly resembled the flesh color.

From page 61 of the present volume of "the Cultivator," it appears "there is frequent complaint among farmers that their sons early imbibe a distaste for agriculture—that as soon as they are of an age to be useful, they seek employment, and leave them to manage the homestead under the disadvantage of hired assistance." Now Mr. Editor, while it is not my present intention to enter fully into the reasons why farmers are frequently thus deprived of the assistance of their sons, I will hint at two or three of what are thought to be causes of such deprivation, by asking a few questions. There are young men in almost every part of the country, who show by their actions that they feel "above" earning an honest livelihood by the sweat of their brows; and while they are *very willing* to keep their hands and clothes from being soiled, and are *very willing* to receive a *full* share of the farming produce, and of the attention of farmers, and of farmer's wives and daughters; do they not receive more of these things, than the young men, who, with moderate desires, and industrious, frugal habits, have chosen the occupation of farmers for themselves? Do not some families forget that "it is a great error, that children may be left to run wild in every sort of street temptation," until it is as difficult to make them like farming work, as it is to make a six year old colt or steer like it? Do not many farmers forget that when young men work but little, and "go to school" much until they are nearly grown up, the turn of their minds and the strength of their bodies are poorly adapted for the farming profession?

Mr. Editor, my intention is to finish this communication by asking a few questions of a different nature from those just asked.

How did Philo Griswold,* of Vernon, Oneida Co., contrive to obtain 415 bushels and 13 lbs. of carrots from one fourth of an acre? How did E. Dayton,* of Vernon, manage to obtain 370 bushels and fifty pounds of potatoes from half an acre? How did C. W. Eels,* of Kirkland, manage to obtain 89 bushels and five pounds of Indian corn from one acre? Can George Vail,* of Troy, conveniently give a statement of the method he pursues to obtain very large crops of Indian corn?

Will a plow fixed on wheels, like some of the English plows, turn a more uniform furrow, as to depth and width; or will they hold easier than a plow without wheels?

Supposing potatoes for seed to be wet and rolled in plaster, and to have a table spoonful of plaster put on each after being dropped in the hill or drill, is there a possibility or a probability that the crop of potatoes, while growing, could so imbibe the plaster as to make them unhealthy for food?

How small an iron rod will suffice to protect a house or barn, 25 by 30 feet, from the bad effects of lightning.

Sandlake, March 9, 1846. S. S. G.

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* We shall be pleased to receive replies from these gentlemen to the questions of our correspondent.—Ed.

W OF DOWNING'S FRUITS AND FRUIT TREES OF AMERICA.—No. I.

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ᴇɴ a book is hopelessly weak or incorrect, it be the object of criticism to exterminate it. But ι work is admitted to be, upon the whole, well criticism ought to be an assistance to it, and not a nce. Praise by the wholesale is better for the ιer than for the reputation of the author; since, vork like Downing's, every pomologist knows rfection is not attainable, and indiscriminate eulo. lines the better read critic to rebutt the praise by development of the faults. Thus on one side is general praise and faint blame; and on the faint praise and general blame.

charged against Mr. D. by implication, that he led little to the stock of pomological knowledge *new;* and therefore that his book cannot be re- as so greatly in advance of others. One would e this to be a criticism more appropriate to an ι, or a rhetorical effort of some sort, than to a Manual. A work which, like Manning's, embo- ly one's own observations, must be limited, and rest only to a few, and these advanced pomolo- Invaluable as are the labors of Manning, his vill be found in but few hands; since, being ori- it is limited. There are a thousand observers, ndreds of writers on fruit; each year the results rvation and experiment accumulate. The author ollects these scattered morsels, and puts them into hape within a moderate compass, adding what- ιis own eyes have seen that is new, has dis- d a good work. We have never seen any reason ieve that Downing had not added much to his tions of fruit that is absolutely new. No one in ιses, could expect even a man born in a garden, aust, at the first effort, so large, so tangled, so rious a subject as pomology. If Downing's work decidedly before any already published, that is enough.

ore serious charge is urged by a correspondent vey's Magazine, (vol. 2, p. 48,) and endorsed by complished editor of that invaluable Magazine. 49 of this Magazine, Mr. Humrickhouse says— ιotice is taken of the fact that others had occu- ιe field before him. One would suppose, indeed, gap—an absolute want—of a manual and work rence existed, and that he is the first and only ho ever conceived the idea of supplying it." , this is to the point, and sufficiently pointed. hat shall be said of the fairness of a critic who ιy such things, when Mr. Downing, so far from ting to mention former treatises, *sets apart a r to them as* "BOOKS QUOTED;" giving them full size, date of publication, &c., &c. In this list ight authors are named, *thirty-three* of whom expressly on pomological subjects! Perhaps it ιght by some, that an author ought to go bowing hand and left through every page of his book, profuse compliments, a hundred times repeated, gay beau in a drawing room! We prefer a more style of literature. Again, it is stated, (Hovey's ine, p. 48:) "He has nowhere, as I can see, suita- knowledged that he has derived assistance from ck or from Prince; and yet both are authors, from , it is apparent, that he has drawn as largely as ιny others;" and the editor adds his hearty appro- pecifies Kenrick, Coxe, Thatcher, Prince, Man- "and *ten* volumes of our Magazine," which, it is are passed over in the *preface*; mention being only of the London Horticultural Society's Cata- ! No man can pretend that Downing has omitted authorities in the body of his book; or in the list hors quoted; it is only in the *preface* that he neg- hem! This is vastly too sensitive for our appre- n. Every page through the book gives these ιs authors and works specific credit for their lc part; all home and foreign authors are register- a separate chapter, as the sources of his informa- but because they are not a *third time* mentioned in the preface, it is said by Mr. Humrickhouse (p. 50,) "Charity, it must be said, impels us to attribute this omission to accident and over-sight, rather than to any deliberate intention."

But we have, in *other* quarters, seen charges of neglect, and of contempt of Mr. Kenrick. It was, we believe, in the Boston Courier that we first saw it. We have taken some pains to examine Mr. Downing's descriptions, one by one, with our eye upon his fidelity in this matter. We do not say that he is perfect. But we do say that he is not open to the sweeping charges so unjustly urged against him. Let us examine. In the descriptions of PEARS, Kendrick is mentioned eighteen times. What pears are they, with which his name is connected? Andrews, Bleecker's Meadow, Beurré d'Amalis, Burnett, Capsheaf, Cumberland, Dix, Fulton, M. Louise, Pitts' Prolific, Queen of the Low Countries, Washington, Lewis, Vicar of Winkfield, Wilhelmine —American pears, or foreign varieties of comparatively recent introduction. Now it is only in respect to these two classes of pears that Kenrick deserves credit. His descriptions of other sorts are borrowed absolutely or simply reproduced. Mr. Hovey thinks his Magazine neglected. This would certainly be a culpable neglect; for in no other periodical has there been so much done for American pomology. But we find it *nineteen* times mentioned in the list of pears. Kenrick is credited in the description of thirty-one apples; and these, chiefly, of the newer varieties, in respect to which only Kenrick ought to have credit.

We do not regard Mr. Downing as immaculate upon this point; it is to be expected that a revised edition will be more scrupulously careful; but we have seen nothing which justifies the charge of *general* disregard of the credit due to the authorities to whom he is indebted. And if there is a quiet assumption of originality pervading his pages, in things not original, let that man who has written a book without secret vanity, cast the first stone.

In proceeding now to an examination of portions of Mr. Downing's book, our desire is to help and not to hinder.

We shall, at present, confine our attention to the catalogue of apples and pears, for all other fruits of our zone together are not of importance equal to these; and if an author excels in respect to these, his success will cover a multitude of sins in the treatment of small fruits, and fruits of short duration. Mr. Downing has shown good judgment in making out his list of varieties; his descriptions, for the most part, seem to be from his own senses; he has added many interesting particulars in respect to fruits not recorded before, or else scattered in isolated sentences in magazines and journals.

But are his descriptions thorough and uniform? While he has added *materials* to pomology, has he advanced the science by reducing such materials to a consistent form? If we compare Mr. Downing's descriptions with those of Kenrick, or even of Manning, he excels them in fulness. If he be compared with classic European pomologists, he is decidedly inferior, both in the conception of what was to be done, and in a neat, systematic method of execution. Indeed Mr. Downing does not seem to have settled, before hand, in his mind, a *formula* of description; sometimes only three or four characteristics are given. Downing sins in excellent company. There is not an American pomological writer who appears *conceived* even, of a systematic, scientific description of fruits. European authors, decidedly more explicit and minute than we are, have never reduced the descriptive part of the science to anything like regularity. We do not suppose that there can be such exact and constant dissimilarities detected between variety and varieteis of a species, as exists between species and species of a genus. We do not think a description of fruits to be imperfect therefore, merely because it is less distinctive than a description of plants. But the more variable and obscure the points of difference between two varieties, the more scrupulously careful must we be to seize them. Where differences are broad and uniform, science can afford to be careless, but not where they are vague and illusory. We can approximate a systematic accuracy. But it must be by making up in the *number* of determining circumstances, that which is wanting in the invariable distinctiveness of a few that are *specific*.

I. Downing's descriptions are quite *irregular* and *unequal*. Both his pears and apples are imperfect, but not alike imperfect. The descriptions of pears are decidedly in advance of those of the apple. It would seem as if the improvement which he gained by practice was very easily traced in its course on his pages.

Hardly two apples are described in reference to the same particulars. With respect to color of skin, size and form, eye and stem, he approaches the nearest to uniformity. But with respect to every other feature there is an utter want of regularity, which indicates not so much *carelessness* as the want of any settled plan or conception of a perfect scientific description.

We will, out of a multitude of similar cases, select a few as specimens of what we mean. Of the *Pumpkin Russet*, he says, "flesh exceedingly rich and sweet;" but he does not speak of its *texture*, whether coarse or fine; whether brittle or leathery. *Pomme de Neige*—"flesh remarkably white, very tender, juicy and good, with a slight perfume;" but is it sweet or sour, or subacid, or astringent? No one can tell by reading the joint descriptions of the *Red* and the *Yellow Ingestrie*, what their flavor is, since it is only said that they are "juicy and high flavored"—but whether the high flavored juice is sweet or sour, does not appear. These are not picked instances. They occur on almost every page of his list of apples. The *Summer Sweet Paradise* is, of course, sweet, since we are three times told of it, once in the title and twice in the text. The SWEET *Pearmain* also, is a "sweet apple" "of a very *saccharine* flavor." Of course it is *sweet*. Nos. 67, 68, 69, 74, 75, and very many more, are described without information as to their flavor except that, whatever it is, it is 'brisk,' or 'high,' or 'rich'—forlorn adjectives unaffianced to any substantive which they may qualify. Sometimes the health of the tree and its hardiness are given, and as often omitted. Sometimes its hardiness of bearing is mentioned, but oftener neglected. The color of the flesh is given in No. 82, but not in 83; in 84, but not in 85; from 86—92 inclusive, but not to the *second* 92, for the Bedfordshire Foundling and the Dutch Mignonne are both numbered 92. The color of the flesh is not given in 93, 97, 100, 101, 103, 110, although the intermediate numbers have it given. Why should one be minutely described, and not all? We should regard it an ungrateful requital for all the pleasure and profit which this volume has afforded us to hunt up and display what, to some, may seem to be mere "jots and tittles," were it not that these, in themselves, unimportant things mark decisively the absence in the author's *plan*, of a style of description which pomology always needed, but now begins imperiously to demand. And we are confident that a pomological manual, *on the right design*, is yet to be written. Our hearty wish is, that Mr. Downing's revised edition may be that manual.

II. We are lead, from these remarks, to consider, by itself, the *imperfect scale* of descriptions adopted by all our American pomological writers, upon which Mr. D. has not materially improved.

The description of the *tree* is very meagre or totally neglected. *Nothing at all* is said of it in cases out of the 174 apples numbered and described. The general shape of the tree is given in but *thirty-eight* instances in the same number.

The *color of the wood* is, usually, noticed in the accounts of pears; but in the account of apples in not one case, we should think, in ten.

The peculiar *growth of the young wood*, in a great majority of cases, is not noticed; but more frequently in the pear than in the apple list. The least practiced observer knows how striking is this feature of the face of the tree. We do not remember an instance where the *buds* have been employed as a characteristic. Are distinctive marks so numerous that such an one as this can be spared? The shape, color, size, prominence, and shoulder of buds, together with their interstitial spaces, form too remarkable a portion of trees to be absolutely overlooked in a book describing the "fruits and *fruit trees* of America."

Equally noticeable is the almost entire neglect of the *core and seed*, as identifying marks. Once in a while, as in the case of the Belle Fleur, the Roman Stem, the Spitzenberg, and the Pomme Royal, we are told, that the cores are hollow. But neither among pears or apples, is the core or seed made to be of any importance. This is the more remarkable as being a decided *retrocession* in the art of description. Prince, wisely following Continental authors, is careful in his description of pears, to give, and with some minuteness, the peculiarities of the seed. But Downing, injudiciously misled by, in this respect, the decidedly bad example of British authors, has, almost without exception, neglected this noble criterion. There is not another single feature, either of fruit or fruit trees, which we could not spare better than the *core and seed*. Not only may varieties be marked by their seeds, but they form, in connection with the core, important elements of diagnoses of *qualities*. A Long-Keeper, usually has a very small, compact core, with few seeds. A highly improved and luscious pear, not unfrequently is wholly seedless; while fruits not far removed from the wild state abound in seeds. Whenever a *system of description* shall have been formed, we venture to predict that the *core and seed* will be ranked at a higher value in it than any one other element of discrimination and description.

The same neglect or casual notice is bestowed upon the *leaf*. If anything about it is remarkable it is mentioned, not otherwise: But is there a page of any book that was ever printed, that has more reading on it than is on a leaf, if one is only taught to read it? *It* too, is not only a sign of difference but very often of *quality*. Mr. D. has availed himself of this criterion in describing peaches. Is it a legible sign only in the peach orchard? He that is ignorant of these marks, and only can tell one *fruit* from another, is yet in the a b c of pomology. Who but a tyro, on importing *Coe's Golden Drop*, would not at once perceive the imposition, if there was one, the moment his eye saw a bud, or its shoulder? Van Mons learned to select stocks for his experiments, as well by the wood and bud in winter, as by the leaf and growth of summer. In a large bed of seedlings every experimenter ought to know by wood and leaf what to select as prognosticating good fruit, and what to reject, without waiting to see the fruit. Nurserymen of our acquaintance, without book, label, or stake, can tell every well known variety on their grounds. One of our acquaintance never had a mark, label, stake, or register, of any kind upon his ground; a culpable reliance on his ability to read tree-faces; for, on his throwing up the business suddenly, his successor fell into innumerable mistakes. It is just as easy for a pomologist to know the face of every variety, as for a shepherd to know the face of every sheep in his flock, or a grazier every animal of his herd.

III. Although the "Fruits and Fruit Trees of America" professes to give the process of management only for the *garden and the orchard*, it ought to include, and we presume was designed to embrace the essential features of nursery culture. Every cultivator of fruit must be a private nurseryman; he needs the same information, the same directions as if he were a commercial gardener. He that designs planting an orchard ought to know the *disposition* of each variety of fruit tree, that he may suit the circumstance of his soil, or provide for the peculiarities of a tree, as a farmer needs to know the peculiarities of the different breeds of hogs and cattle. With a large number of persons it would be enough to say of fruits,—"superb," "extra-superb," "superlatively grand," "extra magnificent;" for such, a *princely* catalogue would answer every purpose. But such as have some knowledge, and every year, we are happy to believe, the number of such increases, ask, not the author's bare eulogy, but a definite statement of all those special qualities on which such eulogy is founded. The exact *taste* of each variety of fruit should be studied in respect to soil; some, and but few, love strong clays; yet fewer thrive upon wet soils; but some will, as the Sweet or Carolina June, which does well on quite wet soils; some refuse their gifts except upon a warm and rich sand; some, and by far the greatest number, love a deep loam, with a subsoil moist without being wet. The buds of some varieties escape the vernal frosts by their hardiness; some by putting forth later than their orchard-brethren. Some varieties thrive admirably by ground or root grafting, while very many, so worked, are killed off during the first winter; some varieties, if budded, grow off with alacrity, others are dull and unwilling; some form their tops with facility and beauty; others, like many men, are rambling, awkward, and averse to any head at all. Some sorts, put upon what stock you will, have singularly massive roots; others have fine and slender ones. Every variety of tree has traits of disposition peculiar to itself; and in respect to traits possessed in common, even these may be classified. In every description there should be, at least, an attempt at giving these various nursery peculiarities. It cannot be done, as yet, with any considerable accuracy. *Fruit trees have not yet been minutely studied.* A florist can give you a thousand times more minute and special information in respect to the peculiar habits and wants of his flowers, than an orchardist can of his trees. Doubtless, it is easier to do it in plants which have a short period; whose whole life passes along before the eye every season, than in plants whose very youth outlasts ten generations of Dahlias, Pansies, Balsams, &c. But that only makes it the more important that we should be up and doing. Let no work be regarded as classic which does not take into its *design* the most thorough enunciation of all the peculiarities of fruits, and pomology will receive more advantage in ten years, that it could by a hundred years of rambling, unregulated, discursive descriptions.

We have drawn our remarks out too long already; and must reserve other considerations for another number. We shall then give Mr. Downing a chance to pay us back in our own coin, as we hope to give the description of some half-dozen apples, that we may by example develop our ideas of the method of describing fruits. The ability which Mr. D. has shown as a horticultural writer, his industry in collecting materials for this, his last work; the skill which he has shown himself to possess in describing fruits, give the public a right to expect that he will "go on unto perfection," and if Mr. D. will adopt a higher standard and set out with a design of a more systematic description of fruits, every liberal cultivator in the land will be glad to put at his disposal whatever of minute observation he may possess. HENRY WARD BEECHER.

Indianapolis, Ia., March 5, 1846.

CULTURE OF FLAX.

The culture of *Flax* is becoming a very important branch of agricultural pursuit. But a few years since, if a farmer sowed more than a bushel of flax-seed, unless he was a very extensive farmer, he was considered by his neighbors as bordering on insanity. The great majority of farmers in those days, sowed but a few quarts of seed, with the view more particularly of raising flax rather than seed. It is now no uncommon thing for farmers to sow twenty, thirty and sometimes fifty bushels and upwards; and notwithstanding the flax is usually destroyed, the seed alone, as a general thing, pays as well and frequently better, than any other crop. The flax is considered of no value from the fact, that the expense of pulling, rotting, dressing and preparing for market, over balances its worth, and hence farmers have resorted to the most expeditious modes of getting rid of it, such as burning it, throwing it into wet marshy places, &c. I have recently had conversations with several farmers, who have for the last two years engaged quite largely in raising it, who assure me that if the flax is cut before it becomes "dead ripe," by paying the same attention to it in curing it that is usually bestowed upon the securing of hay, cattle will not only eat it *readily*, but are very fond of it, besides it keeps them in a very thriving, healthy condition. Those persons with whom I conversed, agreed in their belief, that the flax thus secured, is worth almost, if not quite, as much as the seed.

I wish to mention another important fact in relation to raising flax-seed, which every farmer should know. Several farmers of my acquaintance, the past season, sowed flax-seed and barley on the same ground, and in every instance the yield of either kind, was as great as if sowed separately, besides flax and barley straw combined, makes very excellent fodder. By having proper screens, there is no difficulty in separating the flax-seed from the barley. If, by sowing flax-seed and barley together, twice the amount can be obtained from the same ground, is it not worth at least the consideration of every farmer? N.

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We have received several communications in reference to the practice of growing flax and barley together, but know nothing of its advantages from personal experience. We were not aware that the seed of flax would be matured while the stalk was in so green a state as to be good for fodder; but it will be seen that the above and several other articles speak of it as being valuable for this purpose when mixed with barley straw, and that at the same time a crop of seed is obtained in connexion with the barley.—ED.

SHEEP—ESCURIAL AND ELECTORAL SAXONY.

Are the Spanish Escurial and the Electoral Saxony the same race of sheep? This inquiry has been raised in my mind by reading an article entitled "SAXON SHEEP AND THEIR CROSSES" in the volume of the Cultivator for 1844, page 350. In my ignorance I had supposed they were as distinct as any *two races* of German and Spanish sheep *can be*. If they are the *same thing*, as this writer seems to take it for granted, then all this flourish, which has been made about the superiority of the pure Electoral Saxony Sheep, imported and bred by the late lamented Mr. Grove, is moonshine. For there are men in the country who profess to have the pure Escurials—and if it can be *proved* that they are the real "simon pure" *Electoral Saxons*, Escurials will be thicker than "hair on a dog's back" before 1846 is at an end—the simple reasons being, that Electoral Saxons are in great request and command higher prices.

I had supposed that the Escurials were to be found only in Spain and the Electoral Saxons only in Saxony —and *elsewhere*, only as they have been imported from these countries. I have supposed that an Electoral Saxon sheep never was in Spain—and that the Spaniards have no such variety—and I had supposed that the six varieties of sheep, which Consul Jarvis imported into the United States, were only *sub-varieties* of the Spanish Merino Sheep—*all excellent*, and all in a great measure resembling each other. The Escurials were one of the six—and many have contended that they were not a whit behind any other—while all were similar, each had its excellencies and peculiarities. Will you, Mr. Editor, be pleased to show what light you can on this subject? INQUIRER.

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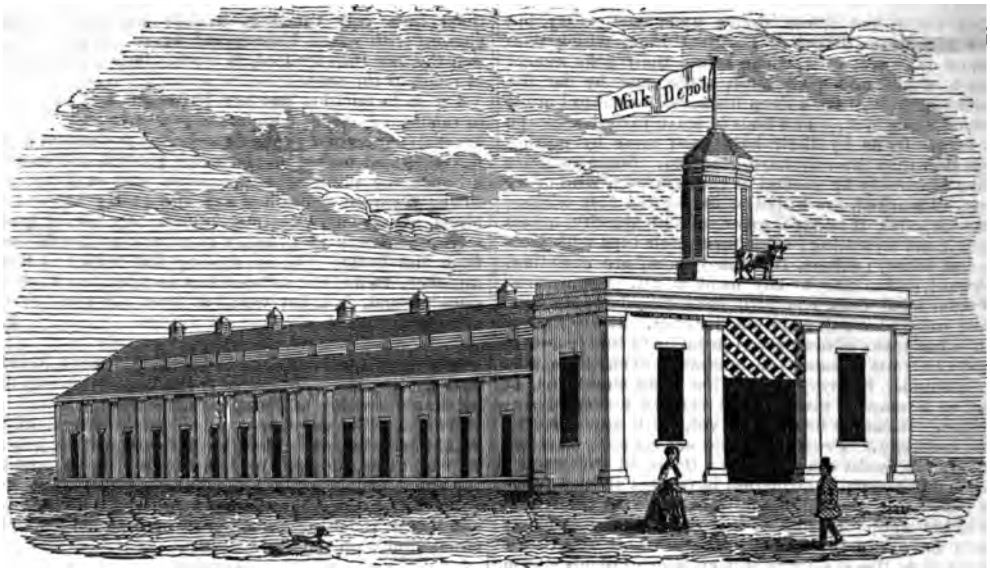
NOTE.—From the best accounts, the origin of the Saxon Merino Sheep, was 200 ewes and 100 rams sent by the King of Spain to the Elector of Saxony in 1765. They are said to have been mostly of the Escurial variety, which are acknowledged on all hands to produce the finest wool of any of the Spanish races, and were particularly cultivated by the Spanish kings. The Electoral Saxon sheep have, according to their history, descended mostly from this Escurial stock. It is claimed by some that they have been improved in respect to fineness of wool, since their transfer to Saxony. Our own observation does not permit us to give an opinion on this point. It must be obvious, however, that the *blood* of the Electoral Saxon and the Escurial must be nearly the same, the former being only a lateral branch of the original stock.



DEPOT OF THE ROCHESTER CITY MILK COMPANY.—(Fig. 32.)

Office of the Rochester City Milk Co.,
Rochester, March 2, 1846.

Luther Tucker, Esq.—In compliance with your request, I herewith transmit to you, a sketch of the Milking House and Depot, which our Company propose to construct this spring, in this city, immediately on the banks of the Genesee river, near the centre of the town, for the accommodation of *one hundred cows*, and for the sale of milk of the very best quality.

The building is in the shape of a ⊣. The front of brick, 50 feet in length, and 25 feet in depth, and 20 feet in height, with a rear building 175 feet long, and 32 feet in width—built with a centre hall or arcade, twelve feet wide and twenty feet high, with windows and ventilators in the tops, (as shown in the sketch,) to admit a free circulation of air, in the warm seasons of the year.

On each side of this hall, there is a range of mangers and stanchions for *fifty cows*—with troughs in front of them, through which water is to be constantly running. The floor is to be of clay, paved with flat stone, set *edgeways*, in the rear of the cows, with a gutter one foot in width, immediately behind the cows; and between these gutters and the doors at the sides of the building, there is an alley, *five* feet in width on each side. The doors for the entrance of the cows are three and a half feet wide, seven feet high, and twelve feet apart. Over the cows, between the hall and the sides of the building, there are floors for the reception of the winter fodder of the stock, capable of holding two hundred tons of hay or corn fodder.

The gutters drain into cisterns in the basement, and trap doors in them let the manure down into carts, in which it is drawn daily to the company farms in the vicinity of the city, where the crops are produced to supply the milch cows in the Depot. The teams bring down a load of grass or hay, and carry back in return, a load of manure—it being cheaper to transport the feed to cows than to cart the milk twice a day, from the farms to the city.

The front of the building is occupied for an office, and rooms for the sales of milk, ice-cream, &c., and the attic for the lodging room of the men belonging to the establishment, while the cellar is used for roots, and milk room, and also a part of it for a small steam engine, employed to cut up and *steam the food* for the cattle, pump the water from the river to supply the reservoirs in the building, and to *heat* the stable in winter, by steam.

In the rear of the office are the rooms for the milk-wagons, and sleighs, and adjoining these is the stable for the horses that are used for distributing milk throughout the city.

The whole cost of the building is estimated at $2,500, including the engine, fixtures, &c.

I will, if you desire it, furnish you with a statement of the manner in which the establishment is to be conducted, and the method of keeping the cows, &c., &c.

Truly yours,
C. B. STUART,
General Ag't Rochester City Milk Co.

P. S. The Rochester City Milk Company furnishes the citizens of Rochester with pure and wholesome milk, at the following low tariff of prices.

DAILY AVERAGE IN 1 MONTH.	From 1st June to 1st October.	From 1st October to 1st June.
36 qts. and over, ...	2 cents per quart.	2½ cents per quart.
12 " under 36, ...	2¼ " "	3 " "
2 " " 12, ...	2½ " "	3½ " "
1 " " 2.	3 " "	4 " "

To find the *average*, add the quantity taken in *one* month, and divide by the days in the month.

FRUIT FOR COOKING.

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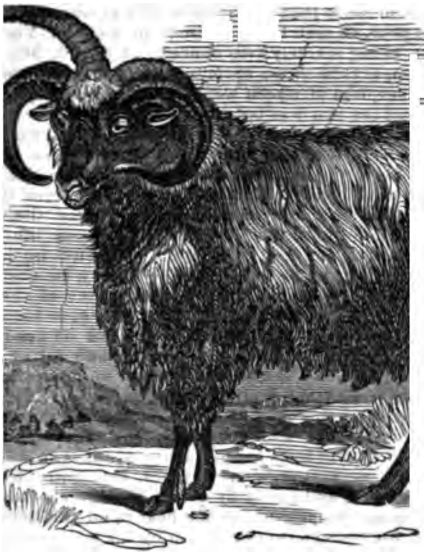
L. Tucker, Esq.—In an article at page 379 of your December number, the writer who describes "Comstock's Garden Apple," falls into a very great error. He says:—"It is generally supposed that for *culinary* purposes, fruit of inferior quality will answer; hence we see in works on promology, and in Nursery Catalogues the division into *table* and *kitchen* varieties. The distinction to which he thus refers, "in nursery catalogues," &c., does not, however, mean any such thing. It refers simply to a distinctive character, and *to a superiority in quality* for a specific object. In regard to pears, we have table and cooking pears, and the same as respects plums, cherries, and other fruits. So in respect to apples: many of the varieties of sweet apples, and others of acid or of an astringent character, which are altogether ill suited for the table, are found to be admirably adapted for cooking, and it is for their *superior qualities* when cooked, and not on account of their inferior quality, that the term kitchen has been applied to them. **Wm. R. Prince.**

Prince's Nurseries, Flushing, Feb'y 8, 1846.



ICELAND SHEEP.—(Fig. 35.)

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EPTING the dog, no species of domestic animals
ts such remarkable variations of character as the
What a contrast, for instance, is shown by com-
the soft and beautiful covering of some of the
h breeds with the hairy and shaggy fleeces of the
the musmon, or some of the wild races of the
: mountains! Again, a diversity no less striking
by comparing the small, light, smooth head of
icester, with that of some of the Tartarian, or
eland sheep; the latter in some instances carrying
: five, and even eight horns, of from a foot to
han two feet in length.

oticing Mr. MORRELL'S "American Shepherd"
onth, we gave a cut of a "fat-rumped" ram. We
resent a cut of an Iceland sheep, with three
The number of horns constitutes the chief pecu-
of these sheep, though they are very useful in
untry to which they belong, being hardy, and ob-
; their living in the barren and rugged parts of
land without attention from man. Their size is
m—their fleece thick, but rather coarse, and only
ited for inferior fabrics. Some of our readers may
ect having seen for several years, one of this
f sheep with four horns, at the farm of Mr. PREN-
near this city.

make another extract from Mr. MORRELL'S book
subject of

PARTURITION OR LAMBING.

ie usual period of gestation with the ewe is five
s, or an average of 152 days.

proper time for parturition must be determined
:umstances, of which climate and locality are the
rominent, and these the flock-master must steadily
n view. The month generally selected in the
ern and Middle States is May, the vicissitudes of
mate forbidding an earlier period, unless in in-
where buildings are provided for shelter, the
se of which is greater than the majority of far-
re willing to incur.

ewes during pregnancy should be disturbed as
s possible, and every attention paid to the quan-
d quality of their food. Ewes, however, should
kept *fat* at this stage; indeed this state is inju-
as it predisposes them sometimes to abortion;
hat is usually termed "good store condition"
be maintained through the whole period of ges-
Neither should ewes be exposed to storms and
uring the winter and early spring months, but
ghly protected from both. It cannot be expected from any domestic animal a healthy offspring, in our rigorous climate, if the dam has been permitted to suffer the hardships of cold and starvation; therefore it will be wise if the sheep husbandman will always hold up to view the apothegm, 'so the dam, so the offspring.' There must be condition to sustain the mother in the trying hour of lamb-birth; and like good condition is equally necessary to sustain the lamb subsequently, and impart to it sound constitution, size, and thrift.

The field chosen for the ewes to fold should be dry, free from stumps, open ditches, and possess as level a surface as possible, as in little hollows ewes are liable to be *cast*, which is caused by lazily stretching themselves in sunny weather, when in a lying posture. In this situation they will often be found flat on their backs and violently kicking the air, without the power of recovery, until aided; and if unseen by the shepherd, death will follow sometimes in a few hours.

But perhaps no field affords that smoothness of surface to prevent these too often fatal occurrences, and therefore the duty devolves upon the shepherd of passing leisurely over every part of the field, several times during the day, to guard against them. But this duty must not be delayed until some of the ewes have dropped their lambs; he must commence his career of watchfulnesss at least ten days before, for it is very common with ewes that are in over good condition to be found in this perilous situation some days before their time.

"The lambs of fine-wooled sheep are extremely sensitive to cold and wet when they drop, and to guard against exposure, the sheep-master must endeavor to anticipate storms, and place his flocks beforehand under shelters. These should be capacious, as the ewe dislikes too much company at the time of parturition, as will be noticed in her retiring often quite distantly, if in a field from the rest of her companions, when the event is about to transpire. In such instances where no sheltering is provided, greater labor and vigilance must be employed, the presence of the flock-tender being constantly needed, with his bottle of warm milk, and putting the more helpless in a large basket, lined with hay or straw, and bringing them before the fire for an hour or more, until animation is restored. When lambs are separated from their dams under such circumstances, care should be observed not to have them wrapped or touched with anything that is offensive, as its scent, when very young, is the principal source of recognition by the mother. A clean blanket or woolen cloth will be best, if swaddling should be found necessary.

"If the season has been unpropitious for early grass, and consequently the keep during parturition too low, the flock should have the run of two lots, which should adjoin, and the communication at all times kept open. The adoption of this course prevents the confusion incident to changing the whole flock at once.

"The number of ewes herding together at this important period should not exceed one hundred, and a still less number will result advantageously to both the flock and master. He should at all seasons keep before him the fact, *that a few sheep kept together will do better than many*, which will be more particularly enforced hereafter."

CURE FOR DIARRHŒA.—A certain cure for this complaint is found in rice water. Boil the rice, take the water, make it palateable with salt, and drink it copiously while warm. We never knew this to fail.

THE CURRANT

THE remarkable hardiness and productiveness of this truly valuable fruit, have induced most land-owners to neglect wholly all care and culture of the bushes. In order to exhibit clearly the difference between good and bad management, we annex exact representations of the size of the fruit taken from two different bushes of the common red currant in the same garden. The smaller bunch was was taken from the old mass of bushes, growing thickly, stunted, and without pruning or culture. The larger was from a small, vigorous, and well cultivated bush in rich ground. The difference in size, should satisfy every one of the great loss sustained by a want of culture and attention.

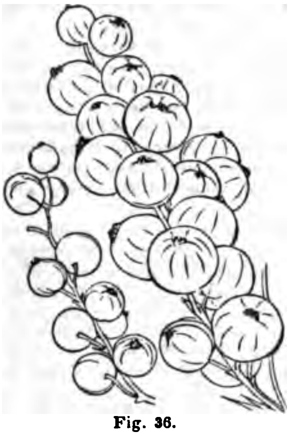

Fig. 36.

CULTURE OF FRUIT.

At what period of his life shall a man plant fruit trees?

MR. TUCKER—There is an old saying that

> He who plants pears,
> Plants for his heirs—

an adage which in one sense is doubtless true, for short lived indeed must be the pear tree that does not outlive him who plants it; but the maxim intended to be conveyed by the proverb undoubtedly is, that the pear is so long in coming into bearing, that he who plants the tree can scarcely expect to taste its fruit himself, and consequently plants it solely for the benefit of his heirs. Now if this were strictly true it would afford no very just ground to refrain from planting, since there is more forecast, and more benevolence displayed in planting a tree for the benefit of one's heirs, than there is in hoarding up gold for them; for the tree will neither run nor fly away, and if well selected and well planted, will continue to bear fruit of great value, for many generations, without much after attention; while all experience shows that too few of the heirs of the wealthy have the skill to prevent gold from taking wings to itself and flying away. Nor would it be very easy to show that we are less bound to plant trees for our posterity than our ancestors were to plant them for us, since the obligation seems equally binding upon every successive generation.

But the following statement will show that the musty old proverb, in the selfish caution it was designed to convey, is entirely without foundation. In the spring of 1843, the writer of this article procured a large pear tree, and grafted several choice varieties upon it, some of which bore fruit the succeeding year, and several more the season that has just passed. In the same spring a scion of the Seckel pear was spliced upon the top of a young apple tree, three feet from the ground. Finding the next season that the graft had acquired about twice the thickness of the stock upon which it was growing, another small apple tree was placed along side of it, and united with the graft six inches above the insertion, in such a manner as to secure a firm union between the two trees. This precaution was taken to prevent the tree from breaking down when it should come into bearing. In May last, two years from the insertion of the graft, it was found to be in blossom, being then 5 feet 8 inches high. It produced 14 pears, four of which were accidentally destroyed; the remaining ten ripened. These pears exceeded by more than [illegible] the Seckel pear is usually found [illegible] acquire. Several of them weighed over three, and one of them more than five ounces; the average weight of this pear, as seen here, or found in the New-York markets, being scarcely two ounces. A friend, Mr. James Dixon, presented me some unusually fine specimens last October, one of which weighed three ounces; the average of the rest was but two ounces.

These experiments, so recently made, if we had no other facts to sustain them, would show that no man, who has strength and capacity to perform the operation, need neglect planting or grafting trees from an apprehension that he shall not live to see their fruits himself; for here is an instance of a man, at the age of 56, planting the seed of an apple of which he had just been eating; at 58 he grafts the tree with the Seckel pear, and at 60, finds it producing some of the finest fruits of its kind that had probably ever been seen. And in all this there is nothing that may not be readily accomplished by almost any person who earnestly applies himself to the task. The cause of the extraordinary size of the fruit requires indeed a little explanation; and this may be found in part in the extreme fertility of the soil in which the tree stands, (the ground having been highly manured for garden purposes, for several successive years, frequently from the hen-house,) and partly by a certain degree of dwarfing that results from grafting the pear upon the apple, and from the constriction produced by the sudden expansion of the graft at its junction with the stock, which operates like a ligature in detaining a greater quantity of sap in the fruit branches.

Nothing is more common than to hear a man at the very period of his life when he is best capable of doing the thing well—from 50 to 60—excusing himself from putting out fruit trees upon the plea that he is too old to be benefitted by it. The two following instances will show at how late a period of life a fondness for the cultivation of fruit has been practically manifested, and at how much later a period of life has been prolonged, as if in reward of the deed.

An aged lady, in the adjoining town of Greenwich, not many years ago, planted a peach in her one hundredth year, and lived to eat the first fruit the tree produced. The Rev. Mr. Cobb, of Braintree, Mass., set out an orchard at the advanced age of 77, and was laughed at by his neighbors, who were much too wise to plant frees for posterity—he lived thirty years afterwards. These it will be admitted are extreme cases, and yet many not very dissimilar ones could easily be collected, were due justice done to the scattered individual enterprise of the nation.

But however meritorious the humblest effort to improve and multiply the kindly fruits of the earth may be, and however great is our obligation to the many nurserymen and skilful horticulturists, as well as to the private individuals of our country, who have devoted their time and resources to the collection and dissemination of the valuable seedling fruits of our land, as well as to the importation of the numerous choice kinds from abroad, time only at present will admit of a passing allusion to the splendid achievments of the two greatest pomologists of this, or any other age; the late Thomas Andrew Knight, of England, and Dr. Van Mons, of Belgium. To the scientific and unwearied efforts of these truly great men, we are indebted for a great number of the fruits, especially of the pear kind, now in cultivation. Mr. Knight pursued the direct mode of obtaining new varieties by cross breeding, from which process sprung those noble pears, the Dunmore and the Monarch. Dr. Van Mons availed himself of that law of vegetable economy which disposes fruit, under certain favorable circumstances, to a gradual improvement for several successive generations; a law which he seems to have been the first thoroughly to elucidate His method was to plant and replant the first fruit of young seedling trees, from three to five successive generations. At every successive planting the trees came sooner into bearing—those of the fifth generation bearing the third year, and nearly all of them producing choice fruit. Beyond the third generation in the stone fruits, the fourth in the apple, and the fifth in the pear, they were not often found to improve; the next movement being generally a retrograde one, sometimes a return even to the most indifferent kinds.

Thus did this most indefatigable man go on planting and replanting, until having devoted the greater part of his life to the amelioration of fruit, his garden, many years before his death, contained of pears alone, more than two thousand varieties, none of which were below mediocrity, and many of them of surpassing excellence. In accomplishing this splendid achievement, he actually planted himself, and carefully examined the fruit of no less than 80,000 varieties. What a task for a single individual, and what a rebuke for those who never plant at all! To him we are indebted for those splendid pears, the Beurre Diel, Beurre Bosc, Dundas, Frederick of Wurtemburg, Queen of the Low Countries, and many others. What a debt of gratitude do we not owe to the successful cultivators of fruit generally, and to those great benefactors of the human family, just alluded to, in particular! Let us evince our sense of the obligation by thoroughly opening our eyes to the good they have done us, and by availing ourselves without delay of the princely banquet they have set before us.

It is now time to recur to the question at the head of this article. "At what period of his life should a man plant fruit trees?" And will not my readers now agree with me that the period should only be limited by actual incapacity, and that we should continue to plant, to cultivate, and to improve, while providence lends us strength to execute the task; never doubting that we shall reap the fruits of our labor; and with the proud consciousness that if we have done something for ourselves, we have done far more for posterity, who will have cause to remember and to bless us.

Port Chester, Jan. 3, 1846. TH. CLOSE.

THE FRUIT CULTURIST:

ADAPTED to the climate of the Northern States, containing directions for raising Young Trees in the Nursery, and for the management of the Orchard and Fruit Garden. By JOHN J. THOMAS.

MR. THOMAS is extensively known as an intelligent and successful cultivator of fruits. His extensive practical knowledge and habitual accuracy, fully entitle his observations to the respect and confidence with which they are generally received. In the work before us, his objects have been to furnish useful directions to those who may be little acquainted with the management of fruit trees, to promote the culture of the best varieties, and by encouraging the adoption of a proper system, to increase the production of fruits, and render more certain the profits of their cultivation. The author has not intended in this case to furnish a large work—it consists of 220 pages, 18 mo, divided into two general divisions; the first containing twelve chapters under the head of "GENERAL DIRECTIONS AND PRACTICES,"—and the second, twelve chapters, "ON THE DIFFERENT KINDS OF FRUITS." To these is added a "DESCRIPTIVE LIST OF FRUITS," embracing apples, pears, cherries, plums, peaches, nectarines, and apricots. An attentive examination of the book only is necessary to satisfy those acquainted with the subject, that it is well calculated to promote the objects for which it was designed. As applicable to the season, we present the following extracts on

GRAFTING.

"The great number of modes described in books, have tended rather to bewilder than to enlighten beginners; the following remarks, therefore, are more for the purpose of laying down *reasons* on which success depends, than for pointing out the peculiar modes of operation, which may be varied according to convenience, provided attention is given to the essential particulars.

"Propagation by grafting differs mainly and essentially from increasing by cuttings, by inserting the cutting into the growing stock of another tree, instead of directly into the soil. The stock thus supplies the sap, as the soil does in the case of a cutting; and the graft, instead of making roots of its own, extends its forming wood downwards, through the inner bark, into the stock itself. Hence there are two chief requisites for success: the first, that the graft be so set in the stock, that the sap may flow upward without interruption; and the second, that the forming wood may flow downward uninterruptedly through the inner bark.

"To effect these two requisites, it is needful, *first*, that the operation be performed with a sharp knife, that the vessels and pores may be cut smoothly and evenly, and the two parts be brought into immediate and even contact. *Secondly*, that the operation be so contrived that a permanent and considerable pressure be applied to keep all parts of these cut faces closely together. *Thirdly*, that the line of division between the inner bark and the wood, should coincide or exactly correspond in each; for if the inner bark of the one sets wholly on the wood of the other, the upward current through the wood and back through the bark, is broken, and the graft cannot flourish nor grow. And, *fourthly*, that the wounded parts made by the operation, be effectually excluded from the external air, chiefly to retain a due quantity of moisture in the graft, but also to exclude the wet, until, by the growth of the graft, the union is effected.

"1. The first requisite is best attained by keeping a keen, flat-bladed knife to cut the faces, and another knife for other purposes.

"2. The second requires that the jaws of the stock in cleft-grafting, press with some force, but not too much, against the wedge-shaped sides of the graft. A stock one-third of an inch in diameter will sometimes do this sufficiently; but three-quarters of an inch is a more convenient size. In whip-grafting, the tongue and slit should be firmly crowded or bound together.

3. "The third requisite is attained by close examination.

"4. The fourth is accomplished by plasters of grafting-wax, and by the application of grafting-clay. Grafting wax may be made by melting together one pound of beeswax, two of tallow, and four of rosin.* It is spread, when melted or softened, on muslin or thin unsized paper, with a brush or spatula. It is sometimes applied without plasters, in which case it should be worked with wet hands, until it may be drawn out into ribbons of wax, which are wrapped round the part. In all cases it should be applied closely, so as to allow if possible no interstices, and covering cut or split surface otherwise exposed to the air. In cool weather, a lantern, chafing-dish, or hot brick, is necessary to soften the plasters before applying them.

"The annexed figures represent the two most common modes usually adopted for fruit-trees; fig. 37, representing whip-grafting, which if well performed with the parts closely pressed together, needs no ligature to keep the graft in its place; and fig. 38, the common mode, or cleft-grafting, which except for small stocks, is generally found best and most certain of success.

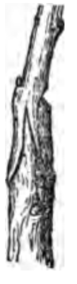

Fig 37.

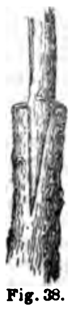

Fig. 38.

"It is hardly necessary here to mention that propagation by grafting and by cuttings is to be performed early in spring before the buds swell;† and that the grafts or cuttings may be cut late in autumn or at any time during winter, provided the natural moisture is preserved until they are used. A convenient mode of thus preserving them, is to wrap or imbed them in damp, not wet moss; or bury them in a box, beneath the surface of a dry spot of earth, the box to be open downwards, and the grafts to be kept from contact with the earth by sticks across the inside of the box."

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* More wax and less rosin is less adhesive to the hands, but more expensive.

† Grafts, if kept in a cold place, in a dormant state, till the leaves of the stock are expanded, may generally be inserted with success, if of the apple and pear. Cuttings are used at various seasons of the year, in hot-house culture

SUPPORTS FOR TWINING ANNUALS.

The annexed figure represents a neat and simple mode of constructing one of these supports. It may be used with a fine effect for such plants as the morning glory, cypress vine, and such delicate twiners as readily ascend to a height of several feet.

The centre pillar is made of wood set firmly in the soil, and furnished with short radiating arms at the top. From the ends of these, small wire chains are stretched in a downward direction and fastened at the bottom, by means of wooden or metalic hooks driven into the earth.—These chains may be cheaply and conveniently made with common wire worked into long links like those used by surveyors.

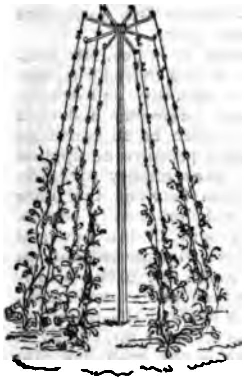

Fig 39.

FRUITS.—WINTER APPLES.

Mr. Editor—Permit me to lay before your numerous readers, some remarks on the most prominent winter apples cultivated in western New-York. It is well to compare notes on this subject with other parts of our country. The growing of choice winter apples for the market, has now become something more than a mere retail business.

I first notice the Newtown pippin, from the fact that no fruit is oftener inquired for than this. Who has not heard of the wonderful crops of this apple gathered from the thousand trees of Mr. Pell, of Ulster county? The published statements of Mr. Pell's success in growing this fruit, has no doubt been quite beneficial to the community at large; but at the same time has had the tendency to lead many into error in regard to it. There are two varieties of this apple, the yellow and the green; neither of which have succeeded well in this section of country, or in the western States; both are of superior flavor, and valuable for their long keeping qualities. With us it is not very productive, and the fruit being very liable to be affected with black spots or canker, renders it unsightly and unsaleable, and is now but little cultivated.

Baldwin, sometimes called the Red Baldwin Pippin. A noble fruit, and well worthy of extensive cultivation. It combines all of the essential qualities, which go to constitute a superior fruit; fine rich flavored; fair size; fine appearance; productiveness; long keeping, and not subject to black spots or canker. This apple is extensively cultivated near Boston, where it is esteemed very highly. It more than sustains its high reputation here. December to March.

Boston or Roxbury Russet. Deserves a place in every good collection, succeeds admirably in the west, very productive, always fair, and is inferior to no other for long keeping. This and the golden Russet, are near allied to each other. The last named is the smallest. The Boston Russet has become so popular that it is now extensively counterfeited. Not however after the manner of making wooden nutmegs; but many of our fruit growers sell all sorts of russets under this popular name.

Rhode Island Greening. One of our most productive sorts, often producing wonderful crops. The writer has often taken six and seven barrels from a single tree. Few sorts are more profitable than this. Many have set out large orchards of this variety. The Fall Pippin and several other sorts are often called by this name. The true Rhode Island Greening never becomes yellow; it is of a dark green color, and at maturity, of a light green. The fruit is of first quality, but not equal in flavor to some others. November to March.

Esopus Spitzenberg. This fruit always commands the highest price in the market. Its superior rich flavor, together with its beautiful color, renders it a favorite for the desert. It is not quite as productive as some other sorts, yet, on the whole, yielding an average crop. It is extensively cultivated in Western New-York, and in the western states. More valuable than any other variety of the Spitzenberg. Nov. to March.

Seek-no-farther; of which we have three distinct varieties, all highly esteemed. The Westfield Seek-no-farther, as described by Downing, is a well known New-England variety; a productive and popular fruit. Dec. to February.

Russet Seek-no-farther, very much resembles the above in shape and appearance, but is nearly covered with a thin russet. Somewhat extensively cultivated in Niagara county. Productive, and will keep somewhat longer than the first named variety. Dec. to March.

Red Seek-no-farther; often known as the Red Gilliflower; a very superior fruit, supposed to be a native of western New-York. Fruit of medium size, form very round, the eye and crown nearly of the same size; skin of a fine orange yellow, nearly covered with a fine brilliant red, approaching to dark crimson on the side next the sun; and dotted with dark russet dots, which are much more prominent on the shady side of the fruit. Stalk three-fourths of an inch long, set in a rather narrow, funnel-like cavity. Calyx nearly closed, set in a wide, shallow, smooth basin. Flesh yellowish white, crisp, of a very agreeable acid, rich, brisk flavor. The tree is a fine grower, and very productive. Nov. to February.

Lady Apple; a beautiful little apple of fine, rich flavor; a favorite among the ladies for the desert. Not much cultivated, although productive; yet too small for profit. "So small," says a lady, "that it would take a cart load of them to make a bushel." December to April.

Pomme Grise, or Canada Gray Apple, a fine gray russet, below medium size, and of rich flavor. There are two varieties called by this name. The smallest is the true one; very productive, and a first rate desert fruit. Highly esteemed in Canada, and cultivated with great success in Niagara county. Dec. to March.

Detroit Red, or Detroit Black Apple. An apple of exalted merit, supposed to have originated at Detroit. Fruit of large size, often very large, generally with prominent uneven ribs. Some specimens quite flat, others rather oblong, large at base and eye. Skin fine crimson, becoming much darker when fully matured. Stem three-fourths of an inch long; calyx mostly closed, set in a wide and shallow plaited basin; flesh white, stained with red, crisp, juicy, and of a very agreeable, moderately acid flavor. Oct. to January. This fruit has become exceedingly popular wherever known. It commands a high price, and finds a a ready sale in the market. It is much larger than the Esopus Spitzenbergh, and its striking appearance commands attention. The tree is not a very vigorous grower, but is very productive, and well worthy of more extensve cultivation. This fruit is widely different from the Red Winter Calville, or Calville Rouge, or from several other varieties of the Black Apple, which are sometimes called by this name.

Tallman Sweeting. This fruit so much admired in its own New-England, has gained but little credit in emigrating to the west. It is inferior in flavor and often insipid. With the *swinish* multitude however, it is held in high repute, and its productiveness renders it worthy of cultivation for feeding stock.

Ambrosial. The popularity of this fruit has now passed away. Some years since, a brother nurseryman and myself were the favored recipients of a few scions of this noted fruit. The friend that gave them us had just received them from a friend going into the western country; had informed our friend that it was an apple of superior merit; indeed there was none better. We felt grateful for the acquisition, and as it was without name, at the suggestion of our friend, we gave it th above name, as an ear mark, for the time being. Years rolled on, and at length our waiting eyes beheld the fruit; a small, one-sided, greenish white apple; as hard as a chip, and the juice pretty good vinegar, without the process of fermentation. We felt somewhat wrathy; called on our friend for an explanation, and he called on his worthy friend to explain, who having now come to the conclusion that "honesty is the best policy," confessed the whole truth of the matter. He had cut the scions from a bundle of trees which he found on the boat, not doubting but it would prove to be superior fruit. Nothing more than petit larceny.

Buffalo Nursery, Jan., 1846. B. HODGE.

CULTURE OF THE GRAPE.

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THE GRAPE requires a deep friable soil, and an exposure in accordance to the class to which it belongs, the foreign varieties alone requiring a particularly warm location. No fruit will admit of such plentiful manurings as this, provided it be properly applied, and the produce of fruit will be thereby immensely increased, and those who say the development produced is in wood without fruit evince great ignorance. Decomposed vegetable or animal manures, and above all the blood of cattle from the butcher's stall, plentifully and frequently mingled with the earth at a short distance from the main stalk of the vine, will cause a degree of vigor and productiveness that will astonish all who have not witnessed their effects. In regard to pruning, the American varieties simply require such thinning out during the winter, as is necessary to prevent the branches injuring each other by contact, and the removal of such weak spurs as are immature and imperfect; but no fear should be indulged that the vine, if in a good soil, is not capable of maturing its fruit on any extent of branches it may naturally produce, as among the most productive vines found in Carolina, there are many instances where a single vine covers an acre. Summer pruning is only called for in locations where the vines are confined in too narrow limits, and then but very partially, as any considerable pruning will cause the fruit to turn black and fall off, and even cutting off the leaves will prevent the maturity of the fruit, as they are the conductors of the essential nutriment from the atmosphere to the fruit and to the whole plant. The foreign varieties, being natives of a much milder climate, require considerable prunings, and but a moderate proportion of the vigorous shoots should be allowed to remain, it being necessary in this case to substitute skill and artifical culture in order to remedy the inappropriateness of climate. The most delicate foreign varieties do not succeed in this latitude except under glass, but in that way they ripen well and are exceedingly productive. WM. R. PRINCE.

FLAX

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IT is a matter of surprise to me that gentlemen of enterprise and capital, do not engage more extensively in the manufacture of fabrics from this article. Large quantities are annually raised in this (Seneca) county exclusively for the seed. The straw, after the seed is thrashed out, is left to lie and rot in the fields; but little or no account is made of it as a manure. The yield of seed is from eight to twelve bushels per acre, and the price is generally one dollar per bushel, which must be a poor compensation, considering it is so heavy a drain upon the fertility of the soil; but could they obtain an equal additional amount for the stalk, the crop might be a profitable one. Numerous articles, such as twine, cordage, ropes, bagging, ticking, sacking, and various kinds of cloth for summer clothing, might be manufactured from flax, which would wear twice as long as cotton; besides it would be helping the farmers in their immediate vicinity, who in return would help the manufacturer. ASON SMITH.

Tyre, Dec. 31*st*, 1845.

CHITTENDEN COUNTY (VT.) AG. SOCIETY.

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THE directors of this society have offered 325 premiums, and appropriated for the payment of them about $750.00. They have adopted a new feature in the award of premiums—that no one man shall receive more than one premium on the same class of animals or articles presented—but if entitled to a second premium in the class, he shall have a certificate or diploma to that effect, stating and setting forth the fact—but the premium shall be paid to the man who presents the next best articles or animals in the same class. This will render the competition much more active, and a far greater variety will be presented. The premiums also will be much more widely scattered over the county, and cannot be concentrated in a few hands.

Another new and most important of all measures is the offer of a premium to every member—in the gift of a copy of the "Agriculturist," or "The Cultivator," to any member who will receive it, on his paying $1 25 instead of $1, to the funds of the society—thus putting into the hands of every member, a paper richly worth one dollar, by his paying twenty-five cents extra to the society. Among the whole number now on our list, amounting to between 400 and 500, only 50 decline the offer; and most of these, not because they object to the plan, but because they have made previous arrangements for their agricultural reading.

Our number of members has been more than doubled, and we hope still very much to increase the list before our show, on the first day of October next. As we get our papers at a reduced price, our funds for premiums are rather increased than diminished by the operation of this plan, which meets with favor everywhere. Would not this be a noble plan, in its practical effects, to be adopted throughout the land, by every agricultural organization? L. G. BINGHAM,

Pres't C. C. Ag. Society.

Williston, Vt., March 13, 1846.

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Accompanying the above, we received the Society's Prize List for 1846. The premiums are all paid in cash, and though small, are so arranged as to draw out an extensive competition; and we shall be surprised if the spirit awakened by the engergetic and judicious efforts of this society does not draw together a larger collection of the farmers of the Green Mountain State at its next exhibition, than has ever before been convened for any useful purpose. Its premiums consist of 16 on horses, 40 on cattle, 65 on sheep and wool, 9 on swine, 34 on field crops, 32 on horticulture, 28 on farm implements, and 107 on household and other manufactures.

SELF-ACTING PUMP.

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In our last volume, pages 245 and 246, we published a communication in reference to this pump, from the inventor, Mr. ERASTUS W. ELLSWORTH. Since then we have received frequent inquiries in regard to the operation, &c. The following interesting extract from a letter received sometime since from Mr. ERASTUS ELLSWORTH, the father of the inventor, would have appeared before, but it was unfortunately mislaid. It will be noticed that the invention has *proved* itself all it has heretofore been represented to be. The well known character of the Messrs. ELLSWORTH justifies the most implicit reliance on their statement:

"Mr. Howard will no doubt be gratified to learn, that the Self-acting Pump, which he saw in operation in my door yard last summer, has not failed, but for a day when it was interrupted by accident, to perform its task to raise all the water which the well furnishes. It now supplies water for twenty head of cattle daily.

"To test its power to elevate water above its station, a lead pipe was attached to the discharge pipe, and carried to the top of the barn near by, and raised to the height of *forty-nine feet*, above the water in the well. At that height it played a jet of about *four feet higher*, evincing a power much greater than had been anticipated. Indeed, the invention has more than met the most sanguine expectations regarding it."

COLMAN'S EUROPEAN AGRICULTURE—PART V.

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In matters of a practical nature, this number is, as we have before intimated, decidedly superior to any that has preceded it.

Mr. Colman proposes to arrange his observations under three great divisions, to wit: arable farming; breeding and grazing; and dairying. He does not intend, however, to give "specific and exact directions in detail for the cultivation of every crop, and for every department of farm management." • • • "My principal object," he observes, "is to point out in European agriculture such circumstances of difference between it and our own as may serve for the improvement of the agriculture of the United States, and to give such an account of the modes of management which prevail abroad, and which have been sanctioned by long practice and experience, as may facilitate their adoption, as far as the circumstances existing among us would render their adoption eligible." He admits that every country must practice modes in some degree peculiar to itself, owing to the variation of climate, facility for procuring manures, price of labor, value of products, &c. "At the same time," says Mr. C., "the general principles of agricultural practice are everywhere the same; and these with the various modifications which they may be expected to assume under different degrees of civilization, or different degrees of improvement in sciences and the arts, and their general and special application cannot be too fully discussed and illustrated." • • • "We may learn much from those who cultivate better, and from those who do not cultivate so well as ourselves. There is little hope in anything so far as great improvement is concerned, for the man who implicitly follows any guide whatever. He must exercise his own reason, experience, observation, and judgment, in the application of rules which may be laid down for his direction."

The Soil.—Under this head it is remarked that "the farmer's whole business so far as cultivation is concerned, lies with the soil; and upon the soil, and the skill and intelligence with which he manages it, must depend his success." Mr. Colman does not assent to the position of "some scientific persons that the principal, if not the only use of soil is for the support of the plant, and that the food of the plant is derived wholly from the atmosphere." Yet, in conclusion, he says—"that plants receive a large portion of their nourishment from the air, does not admit of a doubt." He does not allow much credit to the "notion that plants receive a large portion of their nourishment through their leaves." As before remarked, however, he admits that the atmosphere contributes essentially to vegetation, but, he says,—"so far as any practical use whatever is to be made of the fact, we must consider this nourishment as received through the roots, and consequently through the medium of the soil in which these roots spread themselves, and the manures by which it is enriched. The soil, therefore, as the basis of all vegetation, is the great object of the farmer's consideration."

THEORIES OF THE OPERATION OF THE SOIL.—The subject of this chapter gives occasion to speak of chemical analysis, to which reference has been made in a preceding number. He remarks—"The common properties of soil may be distinguished by the eye or the feel, with persons of experience and practical observation; but chemical examination may often be of the highest importance in detecting the presence of some mineral ingredient, by which the cultivation of particular crops may be hindered or wholly prevented." • • • "What portion of the soil is abstracted for vegetable food is not yet determined; and it is a singular fact that though analytical chemistry has demonstrated that certain mineral substances are taken up in the organism of plants, and are essential in composing their structure, and has proceeded to calculate the actual amount in pounds' weight abstracted by the growth of crops of a particular quantity, it has never yet, by an analysis of the soil before the planting, and as exact an examination after the crop has been removed, determined the loss in such case. Why this has not been done, or whether it be beyond the power of chemical analysis to accomplish,—extraordinary as is the degree of perfection to which the science has been advanced, must be left to others to answer."

The theory of Decandolle, in regard to the exudations or excrementitious matter of plants, by which the soil was supposed to be unfitted for the production of the same species, Mr. Colman thinks is now generally abandoned. But the necessity and advantage of a rotation of crops, is fully admitted both by practical and scientific men, and there seems to be no doubt that a particular crop exhausts the soil of certain elements essential to its production; but adds Mr. C., "it would be extremely interesting if the fact of such exhaustion, and its extent, could be more particularly determined by a chemical examination of the soil which has been cultivated."

Mr. Colman alludes to the theory of Liebig, that the mineral ingredients which are found in the ashes of plants, and which are carried off when the products are removed, require to be returned either artificially or naturally—"that the land being suffered to rest, or applied to a different production, the ordinary influences of air and moisture in decomposing the rocks of the soil, will renew the supply of these mineral elements which have been removed." He thinks that the experiments to which this has led, and which are now going on, must shortly determine this matter, and greatly simplify the processes of agriculture.

To show that the advantages of chemical analysis may be overrated, a quotation is given from the noted chemist, Boussingault: "Chemists of great talent," (says Boussingault,) "have made many complete analyses of soils noted for their fertility; still, practical agriculture has hitherto derived very slender benefits from labors of this kind. The reason of this is very simple; the qualities which we esteem in a workable soil depend almost exclusively upon the mechanical mixture of its elements; we are much less interested in its chemical composition than in this; so that simple washing which shows the relations between the sand and the clay, tells of itself, much more that is important to us, than an elaborate chemical analysis."

In regard to the proportion of lime which is essential to the fertility of soils for various crops, Mr. Colman refers both to Boussingault and Von Thaer, and also to an experiment of Payen, to show that that point is not yet settled. In one of the extracts given from Von Thaer, it is stated that the richest *argillaceous* soil that he ever analyzed, was taken from the bank of Elbe. Of one hundred parts, four and a half were lime. This soil it was said, "was made to bear the richest crops, as cabbages, wheat, autumnal corn, beans, &c., but every sixth year it was necessary to manure it thoroughly and give it a fallow." In another statement of Von Thaer's referred to, he says—"The richest land I ever analyzed, and which was taken from the marshes of the Oder, contained 19½ parts in 100 of humus, 70 of clay, a little fine sand, and *an almost imperceptible quantity* of lime."

Mr. C. next quotes from Boussingault, who cites the analysis of "one of the most fertile soils in the world," to show that the proportion of lime, if indeed its presence is actually required in the soil, is much smaller than some have thought essential. The analysis referred to is that of the soil of Tchornoizem, which embraces an extensive district in Russia. It is stated to have been the opinion of Mr. Murchison, that this land "is a submarine deposite formed by the accumulation of sands rich in organic matters. It is (says Boussingault) the best soil in Russia for wheat and pasturage." The analysis was made by M. Payen, who found the soil to contain—

Organic matter,..................	6.95
(containing 2.45 per cent of azote.)	
Silica,..........................	71.56
Alumina,........................	11.40
Oxide of Iron,..................	5.62
Lime,...........................	0.80
Magnesia,........................	1.22

Alkaline chlorides,	1.21
Phosphoric acid, a trace.	
Loss,	1.24
	100.00"

In relation to the above facts, Mr. Colman remarks—"It is a little remarkable, judging from the analysis here given, that not only is the quantity of lime extremely minute, but even the phosphates, deemed so essential and indispensible to success, are also absent."

Mr. Colman declares, that though he is desirous of encouraging scientific investigations, the known results of which he cannot but admire, yet he deems it proper to exercise caution in our assumptions. "We are very apt," he says, "to exclaim in the extacy of the Grecian philosopher in the successful investigation of an interesting problem, 'I have found out! I have found out!' when, with all the apparent and flattering loosening of the strings, the gordian knot remains as firm as ever. The processes of nature must all be simple enough to the Great Mind which established them, but that is not the human mind. To compare a rush light to the sun, would fall infinitely short of expressing the difference between them."

(To be continued)

THE POTATO DISEASE.

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Mr. Tucker—I am much pleased with the "established facts" presented by Professors Kane, Lindley, and Playfair, in their report on the potato disease in Ireland, as stated by you in the March number of your valuable periodical. And believing that they are correct, and that they will greatly subserve the cause of humanity, and that all possible light upon this subject is desirable, I am led to inquire how they arrive at their conclusions. 1st. Why do "they suggest its connection with the cold, cloudy, ungenial weather of the past season" in Ireland, unless, being atmospherical, it affects the *unripe* vines in that kind of weather?

2d. Why do they conclude that "the potato is not affected in a warm, dry, sunny country," unless by admitting that the vines are only exposed in a cold, ungenial climate?

3d. How do they conclude that "potatoes planted early in the season are more healthy than those planted later," except by admitting that the vines of late unripe potatoes are more exposed to the disease?

4th. Why is it that "the crop has suffered less in dry, elevated, sandy districts," unless "the natural warmth of the soil" matures the potatoes before the time of the appearance of the disease, or rather, prevents its appearance?

5th. How is it that "late varieties are more affected than early ones," unless by being exposed while immature, to the disease in "cold, cloudy, ungenial weather?"

6th. How do "they disprove the opinion that the disease affects old varieties more than new," but by admitting that it affects all varieties when the vines are in a state to receive it?

Thus the "established facts" of these eminent professors confirm the suggestion, in another page of the same number, to plant all varieties as early as possible, thus anticipating the fall disease. And we are happy in stating that there is, in this region, a general determination to do this the coming season. K. Haven.

Shoreham, Vt., March 12, 1846.

ASHES.

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Few farmers know or appreciate the value of this article as a manure. Applied to the young corn crop, they are worth at least one shilling per bushel, while our *ash carts* are gathering them up in exchange for trinkets, which do not nett the farmer more than six cents per bushel. How long will it be before the farmer will awake to his own interest?

Jason Smith.

BARLEY AND FLAX GROWN TOGETHER.

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L. Tucker, Esq.—Mr. George W. Baker put into my hands, the other day, the February number of your paper, the "Cultivator," in which was inserted on page 57 a piece written by G. W. B. on the subject of my raising barley and flax together. Mr. Baker did not receive his information from me, and is therefore, in some respects, erroneous as to matters of fact. I hasten to correct the errors. It did not occur to me last spring to try the experiment of sowing barley and flax together, till I had sowed all but one acre. I then bought me one bushel of flax-seed, and on the acre which I had not sowed, I put on three bushels of barley, and from six to seven quarts of flax-seed mixed together, and sowed the remainder of the bushel of flax-seed on a number of acres more, even when the grain had come up and let it take its own course, without dragging. I had $15 worth of flax-seed from the bushel sowing; as to the acre in question, I judged that I had fifty bushels of barley and about six bushels flax-seed. My crop was all harvested together, therefore cannot be so particular, but the farmer who wishes can learn by experiment. One idea I will add, that if farmers will sow about five or six quarts of flax-seed to the acre with their oats for horse feed, they will not need to visit tamarack swamps to obtain medicine for horses; all will be right in a cheaper way. In cleaning up the grain, if you wish to keep the flax-seed with the grain, a thin board must be substituted for the lower sieve in the fanning-mill, otherwise the flax-seed will be left in the tail-box. Gaius Stebbins

Lebanon, March 13, 1846.

SAMPLES OF WOOL, &C.

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We have received from Mr. Thomas Noble, of Massillon, Ohio, some thirty samples of wool. With the exception of samples from four bucks purchased in the fall of 1844, of the Saxon stock imported by the late H. D. Grove, the specimens sent are all from a stock which Mr. Noble has kept for several years, and which were originally derived mostly from the stock of Messrs. Dickinson & Wells, late of Steubenville, Ohio. On examining and comparing the samples, we agree with Mr. Noble, that "there is no necessity of going to Saxony for fine wooled sheep." In relation to his flock, Mr. Noble says—"I began the winter with 1,600 head, and though our feed was very scanty in consequence of the unfavorableness of last season, yet they are in fine order, and there has not been one death. When the summer comes around, should you wish it, I will give you the cost of keeping per head, the deaths per cent, the per centage of lambs raised, the quantity of wool sheared by each sheep, the selling price of the same, &c.

"I shipped my last year's crop of wool to Liverpool, but it did not answer my expectations. The home market is best.

"I am about establishing a flock of sheep on the prairies of Illinois. I sent out 900 (850 ewes and 50 wethers) last summer. So far they have done well, and if the experiment succeeds it is my intention to make it a large flock—say 10,000."

We should be pleased to receive Mr. Noble's account of the produce of his flock, &c. and hope he will furnish it.

The Wheat Crop.

Mr. Noble says—"Wheat so far looks well. I sow nearly all mine with a *drill*, believing it much the best plan. I had a machine made which sows six rows at once, and is a very efficient article."

Artichokes.

Mr. Noble has for several years cultivated artichokes, and he says—"I am this season more than ever convinced of their great value. While every other crop was nearly destroyed by the ungenial season, [drouth] they were but little affected."

SILK CULTURE.

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We learn that at a late meeting of the American Agricultural Association, Col. Clark read a valuable paper on the subject of the production of silk in the United States. He argued that the advantages of cultivating silk in Europe and this country are altogether in our favor. Here the hatching of eggs is done by the spring season—in Europe it was only accomplished by artificial heat. The time of feeding in this country is 31 days—in Europe 45. The expense of preparations, &c. is much less in this country than in Europe. There every thing has to be done under cover—here the worms succeed best with shelter just sufficient to protect them from the hot sun, and the rains. At the same meeting, Mr. Van Epps, who it is said, has lately become director to the largest silk establishment this side the Alleghanies, made some remarks showing that the progress of the silk-culture in the United States has been more rapid than is generally supposed. According to the *Tribune*, he stated in 1840 there were raised in Maine 211 lbs. of cocoons; 1844, 815; and in the following States:

	1840.	1844.
New-Hampshire,	499	1,100
Vermont,	4,286	10,990
Massachusetts,	1,741	37,690
Rhode Island,	450	1,140
Connecticut,	17,538	176,210
New-York,	1,735	6,340
New-Jersey,	1,796	5,200
Pennsylvania,	47,262	33,110
Delaware,	4,158	458
Maryland,	1,290	8,530
Virginia,	3,191	7,720
North Carolina,	3,014	8,050
South Carolina,	2,080	6,930
Tennessee,	1,217	25,090
Kentucky,	737	5,810
Illinois,	1,154	4,250
Ohio,	4,417	31,500

Total in 1844, 333,277 lbs. equal to 30,000 bushels of cocoons, which would employ 25 reels for six months.

ORANGE CO. AG. SCHOOL.

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We learn that several farmers of the town of Montgomery, Orange county, N. Y., have formed an association for the purpose of establishing a school under the name of "Orange County Scientific and Practical Institute." Mr. James Darrach has been engaged to furnish instruction by lectures and otherwise, in the natural sciences—particularly in vegetable and animal physiology, chemistry, &c.—showing their application to the purposes of the farmer. The different members constituting the association are each to receive a certain number of the pupils, whom they promise to instruct in "all the practical branches of agriculture and the manual operations of the same; and also to watch over their morals and habits, in the same manner that they would their own children, for their permanent good."

The practical knowledge which will thus be imparted to the pupils, can hardly fail to be important—they will be able to see how far the suggestions of the laboratory will be borne out by actual experiment. We annex the following extract from a private letter, on the subject of this school, received from F. J. Betts, Esq., of Newburgh:

"Their system is in one respect, to me, quite new; and I should think would prove of great practical value. I refer to the provision for having the scholars board with the members of the institute, from whom they are to receive instruction in all of the practical duties of the art. Where, as in the case of this institute, the members are all intelligent practical farmers, who take such an interest in an improved state of agriculture as to enter into an association like this, and who stand pledged to carry out and test the accuracy and truth of the teachers' suggestions by actual careful experiments, it seems to me that the student will be more thoroughly taught than he could be by experiments upon a "*model* farm," and he will derive the still greater advantage of instruction in the *mysteries* of household *economy*. *Success* in agriculture must depend upon the economical use of the farmer's means, and the agricultural student who finds no place in his *course of study*, for economy as an essential part of his education, will find himself more of a theorist than a farmer, when his studies are concluded. In the practical farmer's family he will learn how to economise his time, his money, his manures, and in fine, all of his means."

We invite attention to the advertisement to be found in this number.

"COWOLOGY."

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We have received several inquiries in relation to a Treatise on Milch Cows published in France by M. Francis Guenon, and a translation of which, by N. P. Trist, has appeared in the Farmer's Library.

It is claimed that this treatise "discloses infallible signs for determining the milking properties of Neat Cattle." By the aid of the knowledge imparted in this work, it is declared that "one may without fail discover, even in a calf of a few months old, whether it will make a good milker, and is, therefore, worthy of being reserved for the dairy."

The "infallible signs" alluded to, are certain curls (or "quirls") of the hair called "escutcheons." By a strict observance of the position and extent of these "natural marks," it is asserted that "the *quality* and *quantity* of milk which any cow will give, the *length* of *time* she will continue to give milk, &c., &c., may be *accurately* determined."

The treatise is accompanied by numerous diagrams illustrative of the "escutcheons," which, in the opinion of the author, indicate the precise qualities and value of the different classes of cows. The variation of the curls or escutcheons, have been made the basis of an arrangement by which all cows are embraced in eight several classes, each class having two sub-divisions. M. Guenon assumes to give the exact number of "litres" of milk which are yielded by cows of all these classes and divisions.

It is impossible to furnish such a description of the "escutcheons" as would afford the reader a definite idea of them, without the diagrams; and to copy these, might be deemed an infringement on the copy-right of the American publishers. Those therefore who wish to obtain a more particular knowledge of the work, are referred to the Farmer's Library. (See advertisement.)

We have but a word to say in reference to M. Guenon's "Discovery." It is known to every man of observation, that the quantity of milk or butter that may be afforded by any cow in a given time, depends so much on contingent circumstances, that "*accuracy*" in foretelling the qualities of cows must be out of the question. We have had no opportunity of ascertaining how far the application of M. Guenon's rules would show them entitled to consideration; but so long as the "quantity and quality of milk, and the length of time a cow will continue to give milk," are dependent on the nature and quantity of food, the temperature in which the animal is kept, her quietude, and the management, in all respects, to which she is subjected, we know that "natural signs" can be only *general*, not particular and "infallible" guides.

CHEESE DAIRYING IN WINTER.

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Col. T. S. Meacham, of Pulaski, N. Y., called on us one day in February last, and informed us that he was then using the milk of 95 cows for making cheese. The making of cheese at this season of the year is an experiment not before tried, to Col. M's knowledge; but with his complete rooms and apparatus for warming and drying, he feels pretty confident of success. The milk, he thinks, is richer at this season than in summer, and will, he supposes, produce cheese of better quality. He is now, he informs us, erecting a spacious hall for curing his cheese, which when finished, will be 150 feet long and 18 feet in width. Col. M's farm consists of about 1,000 acres, 500 of which, he states, are in grass. He keeps 120 head of cattle, 97 of which are cows. He made last year 30,000 pounds of cheese, 20,000 lbs. of which he sent to New-York at one time and sold for 6½ to 7 cents per lb. He feeds his cows mostly on hay and carrots—2,000 bushels of the latter have been grown on his farm last year. He prefers giving each cow a half bushel of carrots per day. He saved from his grass grounds last year, 300 bushels of grass-seed.

GARDEN OPERATIONS FOR APRIL.

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> "Spring! the year's youth, fair mother of new flowers,
> New leaves, new loves, drawn by the winged hours,
> Thou art returned."

THIS month opens to us a busy season for Gardening Operations. In the month of April, we have frequently very delightful summer-like days, which cause the buds to expand, as it were, by magic; and every fine sunny day, accelerates the progress of vegetation, and is extremely apt to remind us of the beauties of Flora. Now, as there is a peculiar pleasure in viewing rare and beautiful flowers implanted in the breasts of most of us, so is there in others also a love of cultivating them, and "training them up in the way they should *grow*."

The beginning of this month is the proper time to commence work in the garden. Let every border and flower bed be dug and neatly raked. If there is an edging of box, it should be neatly trimmed; box edgings may still be planted if this work has not been attended to last month, which is the proper time. The month of April is peculiarly suitable for propagating by cuttings. This month is considered the best for planting out *Evergreens*, but shrubs of all kinds and herbaceous plants may be transplanted in all this month. Give Dahlias a gentle heat in the hot bed, or bring them forward in pots or boxes in the house, to induce the breaking and shooting of the buds, each of which, cut off with a portion of the tuber, will become a plant. Flower-seeds may now be sown, the tender kinds not until the last of the month. Plants in green-houses or parlors must now have constant air; want of a free circulation of air will cause the plants to spindle up, and flower weakly. Such plants as require now more room may be shifted into larger pots, and kept shaded for a few days until they have taken fresh root. All other plants or shrubs in pots should have fresh mould added to the surface; remove dead twigs and leaves, and give moderate waterings occasionally. Grafting may still be performed. Repair the compost, or clay, of former grafts, if it be cracked or injured. Search for and destroy caterpillar's nests, and exterminate insects of every description. But let us return to the flower garden.

The beds still look gay with the bulbs that were in flower last month; but these will soon disappear, and be succeeded by the fragrance and beauty of the Hyacinth and Narcissus. The varieties of this last named bulb, are quite numerous; the Incomparable is the hardiest, and produces its bright yellow flowers the beginning of this month. This variety is the well known *pasche*, or *pans* flower.

Of the Hyacinth, there are some hundred varieties, embracing a great variety of colors; their hardiness and earliness of flower, offer a strong inducement to all lovers of Flora to cultivate them. They are of every shade of white, yellow, pink, red, crimson, purple and blue; they produce their deliciously flagrant flowers early in the month, and the different varieties continue in bloom four or five weeks. Next in order we have the Tulip. The Tulip wants nothing but an agreeable prefume to render it the finest flower in the world. There are endless varieties of it totally differing from each other, some of them blossoming from the last of this month to the middle of the next. For brilliancy of tint, and combination of all the different colors, the Tulip surpasses all other plants of the garden.

Of the Herbaceous plants now in flower, we have "The Polyanthus broad, with golden eye;" this is an early blower; one of the first flowers which announces spring:

> "Fair handed Spring unbosoms every grace;
> Throws out the snow-drop and the crocus first;
> The daisy, primrose, violet, darkly blue,
> And *polyanthus* of unnumbered dyes."

The double white and blue European Violets are now in bloom. The flower is delightfully fragrant, but of short duration:

> "The trembling violet, which eyes
> The sun but once, and unrepining dies."

Then we have the thick leaved Saxifrage with its purple flowers; the stem changes every year into root. The foliage of this species is very handsome.

The Ornamental Flowering Shrubs contribute but little to the embellishment of the garden. Of the few in blossom, we may enumerate the *Corchorus;* although a native of Japan, it is one of the hardiest shrubs we have; it displays its bright yet low double blossoms towards the last of the month in the greatest profusion, and continues in flower until autumn. The Leatherwood is a pretty shrub; the flowers are yellow, and appear before the leaves. It has the appearance of a large tree in miniature. Of the Missouri Currant, there are two varieties, both flowering very profusely towards the last of the month. P.

NOTE.—In my last communication, in the quotation, "Though lifeless," &c.—for inverting; read, "*investing* every spray."

Westchester Co., March 14th, 1846.

FINE WOOLED SHEEP IN CHITTENDEN CO. VT.

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WITHIN the past two years quite a number of the farmers of Chittenden county, Vermont, have established, on a larger or smaller scale, fine flocks of sheep, mostly Merinoes. These sheep are now found in Charlotte, Hinesburgh, Williston, Colchester, Shelburn, and elsewhere in the county. In Colchester and Williston are to be found Saxons, and in other places grade Saxons and grade Merinoes all over the county. In Williston is now to be found the entire flock of Rambouillet Merinoes, formerly belonging to D. C. Collins, Esq., of Hartford, Ct. They are now owned by L. G. Bingham They are a splendid and magnificent variety of pure Merinoes, imported in 1840. Mr. Collins has never sold a full blood ewe until he sold the flock to Mr. Bingham. Four of the imported ewes are still alive. Some have been destroyed while in the hands of Mr. Collins. All are pure descendants from the imported ewes and old Grandee. All other Rambouillets in the country—ewes—are grades, being produced by a cross of the pure Rambouillet Buck with the American Merino ewe.

A few days since Merrill Bingham, Esq., of Cornwall, Vt., sold 110 full blood ewes to go to Williston, to lay the foundation of two new flocks.

No better sheep can be found in Vermont than can now be found in this county; and some folks are beginning to colonise in order to establish other flocks. We hope to see the time when we can offer to the wool growing public as great inducements to come here to buy wool or sheep, as can be offered by any county in the State.

I presume you will hear more of the 110 ewes spoken of above about shearing time. They were purchased by Messrs. J. G. Chittenden, Thomas H. Canfield and L. G. Bingham. IOTA.

COAL TAR FOR SEED CORN.

MR. EDITOR—It may be of service to some of your readers to know that crows will not eat, or scratch up, corn that has been saturated with coal tar. It does not prevent vegetation as the common pine tar does; is much less trouble to put on, and half a pint is sufficient to saturate a bushel if poured over it and well stirred. It may be well to say, that coal tar can be obtained in any of the cities, and is made at the gas works, and is most excellent to preserve out side wood work. Bryerfield, near Hampton, Va., February 16th, 1846.

A. B. M'CLEAN.

THE CULTIVATOR.

ALBANY, APRIL, 1846.

TO CORRESPONDENTS.

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Communications have been received, since our last, from F. A. Wier, Horace Goodhue, A. B. M'Clean, F. Gillespie, C. Bryant, K., Wayne, F. Roys, A Subscriber, Exordium, Richmond, Wm. Ansley, J. P., R. B., B., D. Rounds, W. H. T., J. M. Weeks, J. Sherman, Wm. Byers. S. S. G , J. T. Grant, H., Rev. H. W. Beecher, K. Haven, Zea, Iota, Inquirer, James Jones, E. C. F., Gaius Stebbins, John Rankin, Wm. Bacon, G., G. P. Waldo, C. Easton, A Subscriber, J. S. Pettibone, C. E. M'C., J. J. King, Germanicus, G. D. W. Elwood, A. H. Halleck, S. N. Hawes.

Books, Pamphlets, &c. have been received as follows, since our last:

Notes on the Iroquois, or Contributions to the Statistics, Aboriginal History, Antiquities and General Ethnology of Western New-York. By Henry R. Schoolcraft. From C. Van Benthuysen & Co.

The American Journal of Science and Arts. By Prof. Silliman, B. Silliman, Jr., and James D. Dana. No. 2, for March, 1846. New Haven, tri-monthly, $ 5 a year. From the Editors.

Vergennes Vermonter. From S. W. Jewett, Esq.

Transactions of the Ag. Society of New-Castle county, Delaware. From J. Jones, Esq.

Proceedings of Clinton County (N. Y.) Ag. Society. From Willets Keese.

The New-York Dissector, a quarterly Journal of Medicine, Surgery, Magnetism, Mesmerism, and the collateral sciences; with the mysteries and fallacies of the Faculty. New-York—H. H. Sherwood, M. D. 56 p. octavo, $1 a year.

Address before the Ontario Ag. Society. By Z. Barton Stout, Esq. From the Author.

Address at the Fair of the Hamilton County (O.) Ag. Society. By the President, J. W. Caldwell, Esq. Unknown.

Constitution, By-Laws, &c. of the Westchester Ag. and Hort. Society.

Belcher's Nova Scotia Farmers' Almanac, for 1846. From the Author.

Schedule of Premiums offered by the Massachusetts' Hort. Society, for 1846. The list is as follows:

For Designs and Decorations,	$200 00
" Fruits,	500 00
" Plants and Flowers,	500 00
" Vegetables,	150 00
	$1,350 00

Vermont Mercury, with an article on Wool Growing, by J. W. Colburn. J. S. Pettibone.

Three numbers New-York Evening Post, with articles on the prices of wheat on the continent of Europe, and on "the weather."

The Morning Telegraph, with notices on Farmers' Clubs.

Proceedings of the National Convention of Farmers, &c. held at New-York, in connection with the Fair of the American Institute, 1845.

The Farmer's Dictionary, a vocabulary of the technical terms recently introduced into Agriculture and Horticulture from various sciences, and also a Compendium of Practical Farming; the latter chiefly from the works of Rham, Loudon, Low, and Youatt, and the most eminent American Authors, with numerous illustrations. Edited by D. P. Gardner, M. D. Harper and Brothers, New-York. [Notice next month.]

"P."—Thanks for your suggestion. We shall endeavor to accomplish the object you suggest

MONTHLY NOTICES.

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Fruits and Fruit Trees of America.—We are glad to see a sixth edition of this last work of Mr. Downing, announced as just issued from the press. No better evidence of the estimation placed upon it by the public, need be desired, than that which is afforded by the rapidity with which successive editions of it have been called for. That Mr. D. has accomplished a work requiring immense labor and the most minute research, with great credit to himself and to his country, will not, we think, be denied by any candid and impartial judge, and we are gratified to learn that he is reaping the reward so justly due to his labors.

New kind of Wheat.—J. V. E. Vedder, Esq., of Geneva, has brought to our notice a new kind of wheat which seems to possess superior qualities. Its origin, in Mr. V's hands, was a few kernels which were lost from a package in passing through the post-office at Geneva. Mr. Verplanck of that town sowed these few kernels and saved the produce. Last year, the quantity of seed was 13 lbs. and 12 oz. This was equally divided between Mr. Verplanck and Mr. Vedder. Mr. V. produced from his part (6 lbs. 14 oz.) *four bushels and one peck*, by measure, weighing 64 lbs. per bushel. It is of very superior appearance—the kernels large, white, and the skin very thin. The heads are of uncommon length—some of them seven inches. The whole length of the stalk, including head, is in some instances, over five feet.

New Kind of Peas.—Mr. Wm. Merrifield has left us a sample of peas which are quite different in their appearance from any we have before seen. They are said to be proof against the pea-bug or weevil which is often so destructive to peas. They were entirely free from the insects last season, though other kinds cultivated by Mr. Merrifield were attacked as usual. They are said also to be very prolific. We understand they were lately brought from Germany.

Fine Mutton.—We acknowledge the reception of a saddle of superior mutton, from Mr. J. M'D. M'Intyre, of this city. It was from a half Cotswold and half South Down wether, only 22 months old; yet the saddle weighed 42¼ pounds. We have tried the quality of this mutton, and find it excellent. If mutton of this quality could be generally produced, we cannot doubt that it would be preferred, by most people, to any other meat—while at the same time it could be produced at much less cost. Mr. M'Intyre breeds both the Cotswold and South Down sheep, pure, and is in the habit of fattening wethers of both these breeds. Last season he sent forty-two to Boston, which sold at nine cents per pound dead weight. He has just sent over twenty more, which sold at the same price of the former. The two lots averaged from 25 to 30 pounds per quarter.

Sweet and Sour Apples.—Mr. J. E. Elliott, of Clinton, N. Y., has sent us several apples of the kind usually called sweet and sour. In those sent, the divisions between the sweet and sour portions, are very distinctly marked by external ridges. The proportion of the sweet and sour parts, varies in different apples. In many cases, there are alternate strips or divisions, each distinctly sweet or sour, over the whole apple—there being sometimes four or more of these divisions. We have several times seen this kind of apple before, it having first been brought to our notice at least twenty-five years since. But we have never seen or heard of but one kind having these peculiar qualities. The sour part is in appearance and taste a Rhode-Island Greening—in fact the apple would at first sight be taken for a genuine Greening, and were it not for the sweet portions, they would be considered identical.

Munificent Offer.—At a late meeting of the American Agricultural Association at New-York, R. L. Pell, Esq., stated that Gardner G. Howland, Esq., had offered the use of his fine farm of 300 acres, at Flushing, Long Island, with all its cattle and implements, for five years, to be used as an experimental farm and such other purposes as might be desired by the society. This, it is said, will render any aid from the Legislature, for the establishment of an agricultural institution, by that association, unnecessary.

Seed Planter.—We would call the attention of those wanting an implement of this kind, to the advertisement of **Lewis'** Planter in this number. A cut and description of this machine will be found in our volume for 1844, page 199. We shall furnish a more particular description hereafter.

☞ In Mr. **Week's** Report on crops, on another page of this number, he speaks of the "male and female blossoms," of wheat and other grain. It may not be amiss to remark that the male and female organs of wheat are in the same flower; hence there are no "male and female *blossoms*."

Introduction of the Alpaca into the U. S.—An association has been formed in New-York for the purpose of importing from Peru the alpaca. Several thousand dollars have been raised and a committee appointed to carry the object into effect. Among the contributors to the fund we notice the names of D. D. Campbell, of Schenectady, who gave $600. Mr. Sheaf, of New-York, $600, and Dr. Wm. Terrell, of Georgia, $300. An agent is to be sent out this spring, who is expected to return with the alpacas in the course of eighteen months.

Rensselaer Institute.—The next term of this Institute, will commence on the first Wednesday in May next. The advertisement, which was crowded out of this number, will appear in our next.

Corn Crop in Tennessee.—A subscriber, near Dresden, informs us that he cultivates about sixty acres of Indian corn, and his crop averages about forty bushels per acre.

FOREIGN.

By the Hibernia, which arrived at Boston on the 20th of March, we have English papers to March 2d. They contain but little intelligence of value in an agricultural view. The corn and provision trade is very dull, owing to the unsettled condition of the British tariff, and there is no prospect of material improvement until that subject has been disposed of by Parliament. Sir Robert Peel's proposition, as mentioned in our last, will probably go into effect. The House of Commons had agreed, by a majority of 97, to go into a consideration of it. This is considered equivalent to the passage of the bill by the Commons, and the opinion is generally expressed that it will pass the House of Lords by a small majority. The past winter in England and Ireland was remarkable for its mildness. Considerable suffering has already been experienced in Ireland in consequence of the "potato disease," and much alarm is excited in various quarters from this calamity.

CHEROKEE ROSE FOR HEDGES.

Mr. Affleck, in the N. Orleans Commercial Times, recommends the Cherokee Rose for hedges. He states, that it has already been fully tried in Adams and Wilkinson counties, Miss., where, to use his own language, —"there are scores of plantations completely and most effectually fenced in with this plant. No animal, whatever," he continues, "larger than a rabbit—and he must creep cautiously—can pass under or through it, after the fourth or fifth year, if it has been reasonably well attended to. It will even confine the negroes to the plantation, or at least compel them to find egress at the gates. It forms a beautiful feature in the landscape, with its rich glossy green leaves, summer and winter—and in the early spring is eminently beautiful, with its long pendulous wreaths of the whitest of all roses."

In regard to cultivation, Mr. A. directs to break up the ground—"open a deep, wide furrow, and fill it with rich compost—throw a couple of furrows back and harrow effectually. At every 2½ feet distance, open a hole with the spade, set in two or three, replace the earth, press it down with the foot, and the work of planting is done. Tend as you would a row of corn or cotton. The cuttings should be fifteen inches long, made from the shoots of last year's growth—the stouter the better. They must be put *fully two-thirds of their length* in the ground."

Mr. A. states that four years with good care is sufficient to make a perfect fence. Whether this plant would suit the climate of this latitude, we are unable to say; if any have tried it at the north, we should be glad to know the results.

THE CLUSTER PEA.

Mr. **John D. Spinner**, of Herkimer, writes as follows: "We have a new kind of pea with us. A neighbor sowed three bushels, and the yield was 120 bushels. He calls them the cluster pea. They are said to have been imported from some of the old counties. It is said there are from 30 to 60 pods on a vine."

FARMER'S SALES.

N. C. **Davis**, of Lunenburg, Mass., suggests that for the purpose of facilitating sales—"the farmers of each town establish an Advertising Box, (perhaps similar to those used in some towns for posting town warrants, &c., only as much larger as the occasion may require,) in some public place in the centre village, where each farmer can make use of it by paying the small sum of ninepence or a shilling a year, which would doubtless pay the expense of making the box and taking care of it." In this box he proposes should be advertised whatever the farmer wishes to dispose of. He thinks—"if every subscriber to the Cultivator would appropriate the small sum of twelve and a half cents for the above purpose, it would amount to enough in almost any town to bring this plan into operation." The plan appears feasible, and would, if adopted, doubtless save much time and trouble.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, March 23, 1846.

COTTON—Upland and Florida, per lb., 6¾ to 8¾a9c.—New Orleans and Mobile, 7 to 9¾a10½c.

BUTTER—Western dairy, per lb., 12½a14c.—Goshen, 16a 18c.

CHEESE—Per lb., 7½a8½c.

FLOUR—Genesee, per bbl, $5 50—Baltimore, Howard-street, $5.12½a $5.25—Richmond City Mills, $6.50.

GRAIN—Wheat, Genesee, per bushel, $1.20a$1.25—Rye, 82a 85c—Corn, 56 lbs., 67a70c.—Barley, 64.

HEMP—Russia, clean per ton, $210—American dew-rotted, $80a$100—water-rotted, $130a$180—Manilla $150.

HAMS—Smoked per lb., 7½a8¾ cts.

BEEF—mess, per bbl., $8a$8.25.

LARD—6¾a7c. per lb.

PORK—Mess, per bbl., $11a$11.50—Prime, $9.50.

TOBACCO—Kentucky, per lb., 2¾a7c.

WOOL—(Boston prices.) March 18:

Prime or Saxony fleeces, washed per lb.......	40a41	cts.
American full blood fleeces,..................	37a38	"
" three-fourths blood fleeces,.........	32a33	"
" half blood do	30a31	"
" one-fourth blood and common,....	27a29	"

LANGDON'S HORSE-HOE OR CULTIVATOR PLOW.

THIS useful and highly valuable article may be had of E. Comstock & Co., at the Albany Ag. Warehouse, 23 Dean-st. Two sizes—one for $7, and the other for $6.

LEWIS' SEED PLANTER,

Manufactured by E. Comstock & Co., Albany Ag. Warehonse.

THE above drill with several valuable improvements, making it beyond all question the best in use, will be ready for delivery early in April. In this drill are combined the qualities of the ordinary machines, enabling it to plant all the small seeds, together with carrots, parsnips, beets, peas, corn, beans, cotton, hemp, and indeed nearly all crops grown in drills. It is simple, and not likely to require repairs for a great length of time. It may be drawn by a horse, or (as it runs easy,) may be operated by one man, or he may have the aid of a boy for using in a garden or for short rows. Retail price $12.00. To dealers a liberal discount will be made. E. COMSTOCK & Co.

April 1

NEW SEED AND IMPLEMENT WAREHOUSE.

Genesee Seed Store and Agricultural Warehouse, No. 10, Front-Street, Rochester, N. Y.

THE subscribers respectfully announce to the public, that they have opened the above establishment for the sale of GARDEN, FIELD, and FLOWER SEEDS, of all sorts,—*Agricultural and Horticultural Implements, Machines, &c. &c.*

They intend to have always on hand, a complete assortment of all the articles wanted in this line by the Farmer and Gardener. No pains will be spared to procure articles of the best quality No seeds will be offered but such as are undoubtedly fresh and genuine—raised in the best establishments of this and foreign countries. The implements will embrace all the newest and most approved kinds, from the best manufacturers in the country.

Fruit and Ornamental Trees, Shrubs, Plants, &c., will be furnished to order from one of the best establishments in the country—the well known Mount Hope Nurseries.

The principal conductor of this establishment has had many years *practical experience* in the business, in Rochester; and being well known to a large portion of the agriculturists of Western New-York, the undersigned hope, by devoting constant and careful attention to the management of their business, to merit and receive a liberal share of patronage. Farmers and others interested, are requested to call at the Genesee Seed Store, or on their agents. RAPALJE & BRIGGS.

Rochester, April 1, 1846—1t.

AGENTS FOR THE ABOVE.

Messrs Elliot & Towsey, Syracuse;
Mr. ——— Lawrence, Druggist, Geneva
Messrs. H. O. Hays & Co., Canandaigua;
Joseph Osborn, Seneca Falls;
John Opdike, Waterloo;
Joseph Annin, Le Roy;
Messrs. Nickerson & Payn, Albion;
Wm. H. Peas, Buffalo.

MOUNT HOPE BOTANIC GARDEN AND NURSERIES, ROCHESTER.

SOUTH ST. PAUL-ST, NEARLY OPPOSITE THE CEMETRY.

THE Proprietors of this establishment offer for sale an unusually large and fine collection of *Fruit and Ornamental Trees, Flowering Shrubs, Roses, Herbaceous Plants, Double Dahlias, Bulbous Roots, Grape Vines, Raspberries, Strawberries, Gooseberries, Asparagus Roots, Rhubarb, Hedge Plants, Green House Plants, &c., &c.*

The collection of fruit trees comprises the most popular varieties cultivated, and have been grown with the greatest possible care to insure accuracy.

The proprietors are *practical, experienced nurserymen*, and devote their entire attention to the business. All the important operations are performed under their inspection. Experience has fully proved that trees grown at this point, in addition to being free from diseases, are better adapted to cold climates than those of any other portion of the United States.

The collection of *Apples*, includes several thousand fine trees, of the famous new American Apple, the "Northern Spy."

A large assortment of *Pears* of the choicest kinds are propagated on quince stocks, for garden culture, as dwarfs and pyramids, and will bear the first and second year after planting. A lot, of extra size, for immediate bearing, are now offered.

The collection of *Ornamental Trees* is large, and includes a few hundred of the splendid *Pawlonia Imperialis*. The catalogue of *Roses* embraces the most beautiful of the new varieties of the several classes, hardy and tender. A choice variety are propagated as standards or Tree Roses, 4 to 6 feet high, very fine. Of *Double Dahlias*, the assortment is unsurpassed—including the finest show flowers introduced to this country, and many that were imported last season, at 5 guineas each—a separate catalogue will be published in April. The stock of *Green House Plants* is very extensive, and includes the most beautiful new Pelargonium, (Geranium) Fuchsia, camellia *roses*, calceolaria, verbena, cactus, &c. All are finely grown, and are offered at greatly reduced prices.

Trees and Plants packed in the best manner, and shipped to any part of the country agreeable to order.

Priced catalogues sent *gratis* to all post-paid applications.

☞ Orders from unknown correspondents, must be accompanied with a remittance or a reference.

ELLWANGER & BARRY.

Rochester, April 1, 1846—1t.

POUDRETTE.

THE Lodi Manufacturing Company have on hand freshly manufactured poudrette, of the first quality, for sale in the city of New-York, at the following prices, viz:

From one to six barrels, inclusive $2.00 per barrel.
" seven and upwards, 1-75 "
delivered in New-York, free of cartage and other expense.

At the factory, on the Hackensack river, where vessels drawing eight feet of water may go, at the rate of $1.63 a barrel, or 35 cents per bushel

This manure is not only the cheapest and best in use, but also is less dangerous to use than some others. Two barrels or eight bushels will manure an acre of corn. Instructions sent *gratis*, with pamphlet when required. Letters (post-paid) addressed to the Lodi Manufacturing Co., 51 Liberty-st., New-York, enclosing the money, will be immediately attended to, or it may be obtained by application at the office of the company. April 1—2t [2]

FRUIT TREES.

FOR sale, a collection of fine *Apple Trees*, comprising 50 choicest sorts; also upwards of 200 distinct varieties of *Pear Trees*; also *Cherries, Apricots*, and *Plums*.

When the order comprises 100 trees, the prices will be for apples, 15 cents; for pears on free stocks for standards, 30 cents; ditto on quince stocks for dwarfs, 20 cents. For any less number than 100 trees in an order—apples, 20 cents; pears, 37½ cents; do. on quince, 25 cts.; apricots, 50 cts; plums, 37½; cherries, 37½ cents. Apply (*by letter post paid*) at the Fruit Plantation of Lloyd N. Rogers, near Baltimore, to THOS. TURNER, Manager.

April 1—2t.

FARMS FOR SALE.

I OFFER for sale *cheap*, two good farms, of 150 acres each, with dairy stock, &c. The one which I occupy is in Ellisburg, the other in Pamelia. Or I will exchange them for a good farm of equal value, in a good and healthy location, from 3 to 6 degrees farther south, a milder climate being desirable.

DANIEL ROUNDS.

Ellisburgh, Jefferson Co., April 1, 1846—2t*

NEW-YORK AGRICULTURAL WAREHOUSE.

FARMERS, Planters, and Gardeners will find the *largest and most complete* assortment of Agricultural Implements of all kinds at this establishment, ever offered in the New York Market. Most of these implements are of new and highly improved patterns, warranted to be made of the best materials, put together in the strongest manner, of a very superior finish, and offered at the lowest cash price.

Among these implements are upwards of FIFTY different kinds of Plows, manufactured by Ruggles, Nourse & Mason, of Worcester, Mass., also in New-York—for the south as well as for the north; Harrows, of different patterns and sizes; Rollers of wood and cast iron, on a new principle; Seed-sowers for all kinds of seeds, a recent invention; Cultivators, with different kinds of teeth; Horse Powers of wood or of cast iron, very strong and superior; Grain Threshers; Fanning Mills; Mills for grinding corn, &c., a new invention; Corn Sheller, for hand or horse power, the latter shelling 200 bushels of ears per hour; Vegetable Cutters, will cut a bushel of roots for cattle in two minutes; Hay, Straw, and Corn-stalk cutters; Scythes, Rakes, Shovels, Spades, Hoes,—indeed Field and Garden Toools of all kinds.

Castings for the various kinds of plows manufactured in Worcester and New-York.

Seeds for the Farmer and Gardener.—A choice assortment of the various kinds, such as improved Winter and Spring Wheat, Rye, Barley, Oats, Corn, Beans, Peas, Rutabagas, Turnep, Cabbage, Beet, Carrot, Parsnep, Clover and Grass seeds, and improved varieties of Potatoes.

Wire-Cloths and Seives.—Different kinds and sizes constantly on hand.

Fertilizers.—Peruvian and African Guano, Bonedust, Lime, Plaster of Paris, &c.

Fruit and Ornamental Trees and Shrubs.—Orders taken for these, and executed from a choice of the best nurseries, gardens, and conservatories in the United States.

Horses, Cattle, Sheep and Swine.—Orders executed for stock of all kinds, to the best advantage.

A *Descriptive Catalogue.*—This will be sent to any one *gratis* upon application, *post paid*, to the subscriber. It comprises nearly 60 pages, and is illustrated with a great variety of wood cuts

Agricultural Books.—A general assortment of all kinds.

A liberal discount made to dealers. A. B. ALLEN,
April 1—1t. No. 187 Water-street, N. Y

PATENT AGENCY, AT WASHINGTON, D. C.

ZENAS C. ROBBINS,

Mechanical Engineer, and Agent for procuring Patents,

WILL prepare the necessary drawings and papers for Applicants for Patents, and transact all other business in the line of his profession, at the Patent Office. He can be consulted on all questions relating to the patent laws and decisions in the United States or Europe. Persons at a distance desirous of having examinations made at the patent office, prior to making application for a patent, may forward (post-paid, enclosing a fee of five dollars) a clear statement of their case, when immediate attention will be given to it, and all the information that could be obtained by a visit of the applicant in person, will be promptly communicated.

All letters on business *must be* post paid, and contain a suitable fee, where a written opinion is required.

Office on F. street, opposite the Patent Office

He has the honor of referring, by permission, to

Hon. Edmund Burke, Commissionor Patents;
Hon. H. L. Ellsworth, late " "
Col. H. H. Sylvester, Ch. Clk. Pat. Office;
H. Knowles, Machinest, Pat. Office;
Judge Cranch, Washington, D. C.;
Hon. R. Choate, Massachusetts, U. S. Senate
Hon. W. Allen, Ohio;
Hon. D. R. Atchison, Missouri;
Hon. Willis Hall, New-York;
Hon. Robert Smith, M. C., Illinois
Hon. S. Breese, U. S Senate;
Hon. J. J. H. Relfe, M. C., Missouri;
Capt. H. M. Shreeve, Missouri.

April 1—1t*

DUTCHESS AGRICULTURAL INSTITUTE.

THE summer session of this institution commences the first week in April, under direction of the subscriber, at the *Wilkinson Premium Farm*, in the Western Valley of Union Vale, 12 miles east of Poughkeepsie.

The course of studies in this institution is such as to give every facility for acquiring a most thorough knowledge of scientific and practical agriculture, with the use of the best modern improved implements. Instruction in physics, with lectures on those natural sciences requisite to constitute a perfect agricultural education, will be under the care of teachers amply qualified. and of tried experience. A select *Farmer's Library* with numerous agricultural papers and periodicals is also provided for the general benefit. The labor performed by the students is under the immediate supervision of the principal who superintends all farm operations.

A course of lectures will be delivered on each of the Domestic Animals, commencing with the Horse, during which a perfect skeleton will be at hand.

The farm contains 220 acres of land, embracing a great variety of soil. The location is pleasant and healthful. The buildings are extensive and commodious, for such an institution; the house 106 by 30 feet.

A conveyance runs regularly to and from Poughkeepsie, on Wednesdays and Saturdays, for the mail and passengers, and the general convenience of the institution.

Students attend church at such places as their parents or guardians may direct.

Students received during the whole season of farm work, the year reckoning in each case from the day of arrival. No student received for less than one year. Fee for the year $200, which includes tuition, board, with beds and bedding, washing, and ordinary mending. fuel and lights.

This Institution is under the patronage of the American Agricultural Association, the Farmers' Club of the American Institute, and the Agricultural Society of Dutchess.

For further particulars address the Principal and Director of Farm operations, Poughkeepsie Post Office, Dutchess County, New-York. JOHN WILKINSON.

REFERENCES.

Board of American Institute;
Board of the American Agricultural Association;
Rev. L. M. Vincent, New-York;
John L. Mason, Esq., " "
Prof. Cyrus Mason, " "
John Van Wyck, New Hamburg. Dutchess County;
Rev. Abraham Polhemus, Hopewell, " "
Charles Bartlett, A. M., Principal Collegiate School Poughkeepsie;
Rev. H. G. Ludlow, Poughkeepsie;
Gen. Thos. L. Davies, President of the Bank of Po'keepsie;
Wm. A. Davies, Esq., Pres. of Farmers' and Manuf's Bank;
Henry S. Richards. Esq, Poughkeepsie;
Rev. S. Mandeville, La Grange.

April 1—2t.

ORANGE COUNTY SCIENTIFIC AND PRACTICAL AGRICULTURAL INSTITUTE.

THE design of this Institute is to afford the most efficient means for the acquisition of a combined scientific and practical knowledge of Agriculture.

A number of farmers residing in the same neighborhood in the town of Montgomery, from 7 to 9 miles west of Newburgh, having united under a written contract one with the other to become instructors to such pupils as may be committed to their care, through the undersigned, their officers, present the Institute to the attention of the public.

Each pupil will be under the practical instruction of the member of the association with whom he may reside.

The Scientific instruction will be under the care of Mr. JAMES DARRACH, a graduate of Yale College, a gentleman of scientific attainments and in common with his associates, the holder of his own plow.

This part of the institution will embrace most of the academic studies, Natural History, and principles of Agricultural Economy.

The peculiarity of this Institute, which recommends it to parents, is, that the practical instruction will be given by practical farmers whose duty and interest compel them to attend to the economy as well as the general management of a farm.

It presents also the following features: family discipline and care; constant companionship with the instructors; varied husbandry and soil which the pupils will be constantly directed to observe and compare. In the neighborhood are places of worship within convenient distance for all to attend, Episcopalian, Presbyterian, Reformed Dutch, Scotch Presbyterian, and Methodist.

TERMS—$125 per annum for tuition and board, payable semi-annually in advance.

Mail and other stages that pass over the Newburgh and Cehocton Turnpike connect our places daily with Newburgh.

This Institute will open for the reception of pupils on the 18th April.

Enquiries and applications may be addressed to either of the undersigned at Coldenham, Orange county, N. Y.

LINDLEY MURRAY FERRIS, Prest

SAMUEL WAIT, JR., Secretary.

References.—Frederick J. Betts, Esq., President of the Orange County Agricultural Society, John Caldwell, Esq, Salisbury, Orange Co., A. B. Allen, Esq., Editor of the American Agriculturist, William Partridge, Merchant, New-York.

April 1, 1846.

TREATISE ON MILCH COWS.

PUBLISHED on the first day of April, 1846, a Treatise on Milch Cows, whereby the quality and quantity of milk which any cow will give may be accurately determined by observing Natural Marks or External Indications alone; the length of time she will continue to give Milk, &c., &c. By M. FRANCIS GUENON, of Liborne, France. Translated for the Farmers' Library, from the French, by N. P. TRIST. Esq, late U. S. Consul at Havana, with Introductory Remarks and Observations on the

COW AND THE DAIRY,

by JOHN S SKINNER. Editor of the Farmers' Library, illustrated with numerous engravings.

☞ Price for single copies, neatly done up in paper covers, 37½ cents. Full bound in cloth and lettered, 62½ cents. The usual discount to Booksellers, Agents, Country Merchants, and Peddlers.

Farmers throughout the United States may receive the work through the mails. The postage on each copy will be about 7 cents. By remitting $2, free of postage, we will send *seven copies* of the work done up in paper covers.

Country merchants visiting any of the cities can procure the work from Booksellers for those who may wish to obtain it. Please send on your orders. Address

GREELEY & McELRATH, Publishers,
April 1—3t Tribune Buildings, New-York.

ROCHESTER SEED STORE AND WAREHOUSE FOR FARMING TOOLS,

Nearly opposite the Market, Front-st., Rochester, N. Y.,

BY JAMES P. FOGG.

THE co-partnership heretofore existing under the firm of B. F. Smith & Co., was dissolved on the first day of January, 1846. The subscriber having purchased the interest of Mr. Smith, will continue the business as heretofore, on his own account

The subscriber is well aware of the important relation which the seedsman holds to the whole farming community, and that upon his honor and veracity the crop and profit of a season in some measure depend. The greatest care has been used in selecting the seeds offered at this establishment for the ensuing year, and they can be relied upon as pure and genuine, carefully selected and raised from the very best varieties, and properly cured. Many kinds were raised in the immediate vicinity of this city, by Mr. C. F. Crosman, and under the inspection of the proprietor; others were raised by experienced growers; while those varieties of foreign growth, which experience has shown are the best, such as Cabbage, Cauliflowers, Brocoli, all the varieties of Garden and Field Turnep, Scarlet Short-Top Raddish, Scarlet and White Turnep Raddish, Dwarf and Early Peas, with twenty choice varieties of FLOWER SEEDS, have been imported by the subscriber from the long established house of R. WRENCH & SONS, of London.

FIELD SEEDS.

Red and White Clover, Timothy, Barley, Seed-Corn, Italian and Siberian Spring Wheat, Early June Potatoes, Marrowfat and other Field Peas, Rye-Grass, Orchard-Grass, Lucerne, &c., &c.

VEGETABLE GARDEN SEEDS.

A choice and select variety of Peas, Beans, Cabbage, Cauliflower, Celery, Beets, Cucumbers, Melons, Raddish, Squash, Herb-seeds, &c.

FLOWER SEEDS.

The collection of Annual aod Perennial Flower Seeds, contains many new and choice varieties.

AGRICULTURAL AND HORTICULTURAL TOOLS.

At the Ware-Room, adjoining the Seed Store, may be found an extensive and complete assortment of Agricultural and Horticultural Implements, embracing almost every tool used in the cultivation of the Farm and Garden.

SUPERIOR PLOWS.

The celebrated Massachusetts Plows, of three sizes. Several hundred of these Plows, have been sold in Rochester, and vicinity, and have given entire satisfaction. Also, Delano's Diamond plow, Subsoil and Side-hill Plows—The Gang-Plows—Two Horse Cultivators, for working summer-fallows, and getting in wheat. Corn Cultivators, Root-Cutters, Corn-Planters, Drill-Barrows, Hoes, Shovels, Scythes and Snaths, Garden-Rakes, Corn-Shellers, Straw Cutters, &c., &c. JAMES P. FOGG,

of the late firm, and successor to B. F. Smith & Co.

Agents for the sale of Rochester Seeds by the pound, &c.

Buffalo, W. & G. Bryant—Batavia, L. Seaver—Lockport, L. H Marks & Co.—Albion, Nicholson & Paine—Brockport, A. B. Bennett—LeRoy, Tompkins & Morgan—Scoutsville, Garbutt & Co—Mount Morris, R. Sleeper—Dansville, H. B. Williams & Son—Geneseo, L. Turner—Canandaigua, L. C. Cheney & Co.—Palmyra, Hoyt & May—Oswego, C. & E. Canfield—Geneva, Hemiup & Cone—Waterloo, T. McClintock—Auburn, Wm. Hughes—Syracuse, Foster & Nott—Utica, J. E. Warner & Co., —Homer, Wm. Sherman & Son—Amsterdam, J. W. Sturtevant—Schenectady, D. L. Powell—Troy, J. Daggett & Co.—Ballston, E. W. Lee—Lansingburg, R. Harrison—Pittsfield, Mass., Isaac C. Cole—Springfield, Benj. R. Blight—Westfield, Jessup & Co.—Hudson, W. & G. Storrs.

Rochester, April 1, 1846—2t.

PLOWS.

FOR list of Plows for sale at the ALBANY AG. WAREHOUSE, 23 Dean-st., see Cultivator for Feb., 1846, page 72. Agricultural Implements of all kinds, for sale at the same place.

March 1, 1846. E. COMSTOCK & Co.

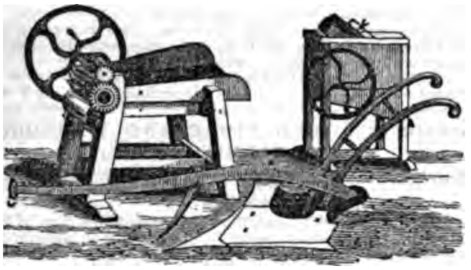
PRINCE'S MANUAL OF ROSES.

Price 50 Cents.

THE new and improved edition of this work will be issued the present week. It comprises the most complete history of "*The Rose*," and of the all branches of this most interesting family that has ever appeared in Europe or America. Every variety that is comprised in any English or American work on the subject, is described in this, together with an immense number of the splendid new varieties that have not been noticed in any other previous publication. The most ample information is also given as to culture and propagation of all classes of "The Rose."

Published by the author, Wm. R. Prince, Clark & Austin, Saxton & Miles, Wiley & Putman, and Swords, Stanford & Co. New-York.

New-York, April 1, 1846—1t



PROUTY & MEARS, BOSTON,

CELEBRATED, highly approved, and unequalled CENTER DRAFT PREMIUM PLOWS—for sale at their *sole agents'*,

JOHN MAYHER & Co.'s

Agricultural Warehouse, 195 Front-st., near Fulton, New-York.

The subscribers have just received a large assortment of Prouty & Mear's celebrated and highly improved CENTER DRAFT PLOWS, which are in every way *superior to all others now in use;* and having been appointed sole agents for the sale of the same in the city of New-York, we invite the public to call and examine for themselves, as the above plows cannot be obtained at any other establishment in the city. Dealers and others in the country supplied on the most reasonable terms.

We also wish to inform merchants and farmers that we have constantly for sale plows of our own manufacture, and all others now in use.

The following is a list of prices of some of the plows manufactured by us.

A No. 1, Worcester patent,		$1 50
A " 2, " "		2 00
A " 3, " "		2 50
2 B " "		3 50
2 B " "	with colter,	4 00
Eagle, No.1, " "		4 50
" " " "	with colter,	5 00
" " 2, " "		5 00
" " 2, " "	with colter,	5 50
Meadow C " "		5 50
" " "	with colter,	6 50

Castings to fit the Worcester Ploughs, 3½ cents per pound.

We likewise have for sale the most extensive assortment of *Agricultural Implements* ever offered in this city, most of which are new and highly improved patterns, warranted to be made of the best materials, and of very superior finish, among which are the following:

Pitts' Corn and Cob Crusher,
Hussey's " "
Sinclair's " "
Hussey's Reaping Machine,
Bark Mills, 4 sizes,
Coffee " "
Corn Shellers of all kinds,
Horse Powers " "
Threshing Machines "
Subsoil Plows, of the most approved kinds,
Cultivators of the most approved kinds,
Sinclair's Stalk and Straw Cutter,
Hovey's " " "
Stevens' " " "
Greene's " " "
I. T. Grant & Co.'s Prem. Fan Mills,
Clinton's Prem. Fan-Mills,
Rice's " "
Holmes' " "
Store Trucks, Wheelbarrows,
Mule Waggons, &c., &c.,

Langdon's much approved Cultivator Plows or Horse Hoe. All kinds of plow castings constantly on hand. All the above articles are offered for sale on the most reasonable terms. Castings of all kinds made to order.

JOHN MAYHER & Co.,
195 Front-st., N. Y.

N. B. *Beware of Imposition.* Any person offering plows for sale, and representing them to be of our manufacturing without the full name "J. MAYHER & Co.," on the mouldboard and beam of the plows, are guilty of a *false representation*, as no person in the city and county of New-York has the genuine article for sale [illegible] ourselves. April 1—tf [2] J. M. & Co.

"MANHATTAN AGRICULTURAL STORE."

PLOWS manufactured, and plow castings of all kinds made to [illegible] general assortment of agricultural machines. [illegible]

"MANHATTAN AGRICULTURAL STORE."

J. PLANT, No. 5 Burling Slip, New-York City.

ORDERS for the *genuine* "Warren Patent (latest) Improved Horse Powers and Threshers," promptly attended to by the sole proprietor, (J. Plant,) viz:—

One Horse Power alone—price,	$40 00
Two " " " "	50.00
Four " " " "	75.00

One, two, and four horse Threshers—price, $20, $25, and $30. Liberal discount to dealers.

AGRICULTURAL WAREHOUSE,

By Ezra Whitman, Jr., 55 Light-street, Baltimore.

THE proprietor of this establishment is the sole agent in Baltimore and vicinity, for the sale of the following *new* and valuable improvements, viz:

Whitman's improved Rail-way Horse-Power and Threshing Machine, which threshes and cleans the grain at one operation.

Prouty and Mears' Centre Draft Plow.

" Hovey's Premium Straw Cutter.

I. T. Grant & Co.'s Premium Fan-Mill.

Douglass' Premium Pumps, which are so constructed as to prevent freezing in the coldest of weather.

Rogers' Mill, for cutting and grinding corn stalks.

Together with a general assortment of the *latest* and most *approved* agricultural implements, constantly on hand, and manufactured to order. EZRA WHITMAN.

Baltimore, Nov. 14, 1845.

BURRALL'S CORN SHELLER.

THE subscribers are now fully supplied with this valuable Sheller so as to be in readiness hereafter to fill orders for any number, without delay. A further trial during the last month has fully established the superiority of this over all other Shellers for hand power. For description, engraving, &c., see Cultivator for February, page 60. Retail price $10, with a liberal discount at wholesale.

E. COMSTOCK & Co.
Albany Agrl. Warehouse

March 1st, 1846.

DURHAM BULL FOR SALE.

THE subscriber (not having sufficient use for him,) offers for sale his imported, thorough bred Durham Bull, "Prince Albert,"

He is five years old—a roan, of medium size —quiet in temper, and easily managed. For a portrait and description of this bull, see the August number of the Cultivator, and for his pedigree see the British Herd Book, vol. IV., page 362. His sire was the celebrated bull, "Sir Thomas Fairfax."

If not previously sold, he will be will be offered for sale at the next show of the New-York State Agricultural Society.

Letters on the subject may be addressed to the subscriber at Red Hook, Dutchess county, N. Y., where the bull can be seen.

Jan. 1, 1846.—tf ROBERT DONALDSON.

VALUABLE FARM AND COUNTRY SEAT FOR SALE.

THE subscriber offers for sale the Farm on which he now resides, situate in Southwick, Hampden county, Mass. The road from Hartford to Northampton, via Westfield, along which a mail coach passes daily, and nearly through the centre of the Farm, which contains about 400 acres, nearly half of which is wood land, heavily timbered. It is bounded on one side by the Farmington canal, which renders the communication with New-Haven, an excellent wood market, easy and expeditious. The buildings are a mansion house, with a wing, the latter new, making a front of 70 feet. Also a house for a tenant; three large barns, nearly new, covered with pine and painted; a corn house, carriage house, sheds, &c. Great pains have been taken in selecting and cultivating choice fruit, and there is now on the Farm, in full bearing, a great abundance of the best varieties of apples, cherries, peaches, &c. A part of the land is of superior quality, and on almost every lot is living water.

Tariffville, a larg manufacturing village, seven miles distant, affords a ready market for wood and every kind of produce, raised on a farm. This is one of the most valuable and desirable locations in the country, not only for farming purposes, but for the gentleman of leisure. A large portion of the purchase money, if desired, can remain for a term of years. I will sell the whole together, or in two parts. Letters of inquiry addressed to me, will receive prompt attention, or inquiry can be made of LUTHER TUCKER, Albany, or of R. SHURTLEFF, Springfield.

ROGER S. MOORE.

Southwick, March 1, 1846.—3t

100 DOZEN CAST STEEL HOES.

THE subscribers have on hand an elegant assortment of Cast Steel Hoes, highly polished, and finished in the best manner. Among them 50 dozen made by Henry Tower, of Milbury, Mass., of four or five different numbers and prices. Also several other kinds of neck and eye hoes. Merchants and others dealing in hoes are invited to examine them. E. COMSTOCK & Co.

Albany Ag. Warehouse, March 1, 1846.

ASPARAGUS ROOTS, two years old and of very thrifty growth, for sale by ISAAC ROOSEVELT, [illegible]

FIELD-SEEDS AT THE ALBANY AGRICULTURAL WAREHOUSE.

300 BUSHELS BLACK SEA WHEAT, both red and white varieties.
200 bushels Italian wheat.
200 " Marrowfat Peas.
75 " Black-eyed Peas.
100 " Canada Peas,
15 " Emir or Skinless Barley.
150 " Four rowed Barley.
250 " Two rowed Barley, (an uncommonly fine sample.)

CORN

"Large Dutton," 12 rowed;
"Improved Dutton," 12 rowed, raised by S. W. Jewett, Vt.;
Loug 8 rowed yellow;
Madawasca or early Canada;
White Flint, (long ears,)
Small White Flint.

CARROT

100 lbs. Large white;
150 " Long Orange.

TURNEPS.

350 lbs. Ruta-baga or Swedish;
100 " Large English Norfolk;
100 " White flat, or winter.

GRASS SEEDS.

Timothy, best quality,
Northern Red Top,
Large Northern Clover,
Lucerne or French Clover,
Orchard Grass,
Southern Red Top,
Western Medium Clover,
White Dutch Clover.

All the above may be had of best quality, at the Albany Agricultural Warehouse and Seed Store, 23 Dean-st.

March 1. E. COMSTOCK & Co.

BUFFALO NURSERY AND HORTICULTURAL GARDEN.

THIS nursery was commenced upwards of twenty-five years ago, and now contains a very large number of the most choice and proved varieties of select fruits: together with a fine collection of ornamental Trees, Flowering Shrubs and Plants.

Individuals wishing to forward Trees to the Western States, will, perhaps, find it to their advantage to purchase here. The stock of choice and select Apple Trees (comprising 1500 of the most noted varieties) is now very large and fine. Prices very moderate.

His descriptive Catalogue, a pamphlet of 40 pages, forwarded gratis, to every applicant. Trees packed in superior order, and forwarded with dispatch. Orders will receive the most prompt attention. B. HODGE.

Buffalo, N. Y., March, 1846.—2t*

STODDARD'S SEEDLING STRAWBERRY.

PPANTS of this new seedling may be obtained on the opening of the ensuing spring season, of the original producer, J. S. STODDARD, Palmyra, N. Y. The superiority of this variety of the Strawberry, in respect both to quality of fruit and certainty and bountifulness in bearing, has been fully demonstrated by a number of years trial. Inquirers are referred to an editorial notice in the Cultivator of August last, p. 251. Plants will be put up in a secure manner, and may be sent by express or otherwise to almost any part of the country, or to Europe. Price $5 for 50 plants All orders must be accompanied by the cash, (post paid if by mail.) and should be addressed to the proprietor as above.

Palmyra, March 1, 1846.

PATENT PREMIUM FAN-MILLS.

I. T. GRANT & Co., still continue to manufacture the celebrated Improved Patent Fan-Mills, at the old stand, Junction, Rens. Co., N. Y. These mills have taken the *first premium* at the following places:—New-York State Fair, at the Institute, New-York, the State Fair, at Pennsylvania, and the State Fair at Maryland. The subscribers have no hesitation in saying that these mills surpass anything of the kind ever offered in market. They are the only mill that has ever been produced that will chaff and screen wheat perfectly clean in one operation.

We also manufacture *Grain Cradles* of the very best quality, which have taken the first premium at the New-York State Fair. They are for sale at factory prices, at the following places:—

A. B. Allen's, 187 Water-st., New-York;
D. L. Clawson's, 191 " "
E. Comstock & Co.'s, Albany;
H. Warren's, Troy; and
Viall & Warren's, Mechanicsville, Saratoga Co., N. Y.

All orders thankfully received and punctually attended to. All goods delivered at Troy, N. Y., free of charge.

I. T. GRANT, &Co., Junction P. O., Rens. Co., N. Y.

Feb. 1—tf [2]

GARDEN SEEDS.

THE subscribers have now on hand a full stock of choice garden seeds, which can be furnished to dealers or to growers and gardeners in any quantity, either in small papers or in large packages. They would solicit especial attention to this branch of their establishment, as they mean at all times to be supplied with the choicest seeds to be had in this country or Europe.

E. COMSTOCK & Co.
Albany Agrl. Warehouse, No. 23 Dean-st.

March 1, 1846

PRINCE'S LINNÆAN BOTANIC GARDEN AND NURSERIES

Flushing, L. I., near New-York.

WM. R. PRINCE & Co., offer for sale their unrivalled collection of Fruit and Ornamental Trees, &c. The entire Fruit Department is carefully scrutinized by them personally, and ingrafted from the largest collection of bearing specimen trees in the Union, and they challenge a comparison in accuracy with any establishment in Europe or America. Purchasers are solicited to inspect their trees and witness their superior size and vigor. The preeminence claimed can be readily tested by sending duplicate orders to them and to any other nursery. They have 3000 extra sized Pears, (on Pear and Quince,) 8 to 12 feet, with heads, very strong and suitable for immediate bearing, and 10.000 Pears, 5 to 8 feet, and 2000 for Dwarfs, or en Quenouille. Also Plums, and Apricots on Plum of the same sizes, and a large stock of the finest Apples, Cherries, and Peaches, the latter very low by the hundred or thousand. 10,000 Quinces 3 to 6 feet. 5,000 Lancashire Gooseberries, assorted. Victoria and other Currants. Fastolfs Franconia, and other Raspberries, at low rates. Of Grapes, the assortment comprises all the most celebrated and *carefully selected* foreign varieties. The collection of Roses is the largest in the Union and comprises 70,000 Plants of 1,300 varieties, embracing every novelty that could be selected from ten of the largest collections in Europe, and the plants are much larger than are usually sold. 10,000 Magnolias, 3 to 10 feet; 20.000 Evergreen trees, of every class and size; 50,000 Hawthorns and Privets for hedges; 50.000 large Dutch Asparagus, and 5000 Tobolsk, Victoria, and Leviathian Rhubarb. Of Ornamental Trees, they have above 200.000 of every class and size, including 1000 splendid Paulownia Imperialis. 6 to 8 feet. The purchasers may save two years by the superior size of their trees and shrubbery. Priced Catalogues sent to every post-paid applicant.

March 1, 1846.—2t.

ARE sold at the *Seed and Implement Warehouse* of the subscriber, No. 65 Chestnut-st., Philadelphia.

DAVID LANDRETH.

*** Country merchants, and other dealers, will observe that the above seeds are essentially distinct from those obtained by foreign importation, or chance purchase at home, which are at best uncertain. Supplies can be had in bulk, or in retail papers, each bearing the advertiser's label and warranty.

Extract from the "Report" of the Visiting Committee of the Pennsylvania Horticultural Society;" unanimously adopted, and ordered to be printed.

"LANDRETH'S NURSERIES AND GARDENS."

"These extensive grounds are on Federal street, near the Arsenal. * * * The earliest collection of Camellias was made here. Some of those now in the possession of those distinguished nursery-men, are ten feet high. * * * The selection of *green house plants* is valuable and extensive. * * *

"The nurseries are all *very correctly managed*, supplying every part of the union, a detail of which would occupy too much of our space; we therefore content ourselves with stating that the stock is very large, and in every stage of growth, consisting of FOREST and ORNAMENTAL TREES, SHRUBS, EVERGREENS, VINES, and CREEPERS, with a collection of herbaceous plants; FRUIT TREES of the best kinds, and most healthy condition; large beds of seedling apples, pears, plums, &c., as stocks for budding and grafting; a plan very superior to that of working upon suckers, which carry with them into the graft all the diseases of the parent stock. * * *

"GARDEN SEEDS of the finest quality have been scattered over the country from these grounds, and may always be depended upon. The seed establishment of these Horticulturists is one of *the most extensive in the Union*, and its reputation is well sustained from year to year.

"To obviate the chance of mixture of the farina of the plants of the same family, they have established another nursery at a suitable distance, so that degeneration cannot take place, and which secures to the purchasers "a genuine article." Knowing thus the age, quality, and process of culture of every plant, *the supply from their grounds is recommended with great confidence*."

*** Since the date of the "report" from which the above is abstracted, the *entire establishment* has been *greatly enlarged*. The collection of Camellias embraces all the finer kinds, and consists of some thousands of various sizes; so likewise of Roses and other desirable plants, both tender and hardy, Fruit trees, &c.

The Seed Gardens alone, cover *fifty acres*, and the whole is, as it has been for more than *half a century*, under the successive management of father and son, the *most prominent of its kind in America*.

☞ The Nursery department is conducted by D. LANDRETH & FULTON. Catalogues gratis.

Philadelphia, March 1, 1846.—2t.

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PLATT'S PATENT (LATEST) IMPROVED PORTABLE BURR-STONE MILLS.

THE 24 inch size of these Mills has recently been set up in operation in this city, *with some important improvements attached to it*, and the fact is ascertained that with less than two horse power, about 5 bushels of fine meal, and some 12 to 15 horse feed, (corn and oats) is readily and beautifully ground in an hour. Further particulars will appear hereafter. These mills, all the sizes, and patent rights in same, are for sale by the proprietor in this city. JAS. PLANT, 5 Burling slip.

New-York, April 1—1t.

SIXTH EDITION—JUST PUBLISHED,

THE FRUITS AND FRUIT-TREES OF AMERICA: Or the Culture, Propagation, and Management, in the Garden and Orchard, of Fruit Trees generally, with descriptions of all the finest varieties of Fruit, native and foreign, cultivated in this country. By A. J. Downing, Esq. *Sixth Edition*, with corrections. 1 thick vol. 12 mo., with numerous illustrations. $1.50.

"Full of useful information for fruit cultivators generally, as well as for those in America to whom it is more especially adapted."—*Lindley—London Gardeners' Chronicle.*

"This work will advance horticulture in the United States twenty years at one leap."—*Ohio Cultivator.*

"From the known abilities and critical observation of the author—his extensive correspondence with the most experienced horticulturists of this and other countries, and in particular for his unwearied and indefatigable labors of many years, the results of which he has given to the public in the volume under notice,—it is to be recommended as containing a greater amount of pomological information than any other American work, and as deserving the careful study and attention of the farmer, the amateur, the gardener, and all lovers of fine fruit."—*N. E. Farmer.*

"Nothing compared with it on the subject of pomology has yet been published in the United States."—*American Agriculturist.*

Also, *Downing's Landscape Gardening and Rural Architecture*; 2d edition, beautifully illustrated. 8 vo. $3.50.

Downing's Designs for Cottage Residences; 2d edition, with many engravings. 8 vo., $2.00.

Ladies' Companion to the Flower Garden, edited by A. J. Downing. 12 mo. $1.50.

Published and for sale by WILEY & PUTNAM,
April 1. 161 Broadway, N. Y.

ALBANY AGRICULTURAL WAREHOUSE,

No. 23 Dean-Street.

THE subscribers ask the attention of farmers to their assortment of AGRICULTURAL IMPLEMENTS, FIELD and GARDEN SEEDS, embracing all the varieties needed for the farm or garden. Our articles have all been selected with the greatest care and attention, and with especial reference to their adaptation to *improved* agriculture. For notice of articles see separate advertisements in this paper. But as we cannot enumerate the articles, seeds, &c., here, we shall be happy to show them to all who may call at our warehouse. E. COMSTOCK & Co.

April 1. 23 Dean-st

L. TUCKER, Esq.—I have this morning received my Cultivator, and in it I am surprised to find in a letter addressed to you by Ruggles, Nourse & Mason, my name introduced as having advertised their plows "unauthorized," and to "deceive" the public. *Such however, is not the fact* If by any advertisement of mine, I had supposed for a moment, I was entrenching on their exclusive rights, it would not be like me to allow it to appear over my name.

The fact, however, is, I had permission to sell Messrs. Ruggles, Nourse & Mason's plows, and had samples on hand, and never was restricted in any way, to my knowledge, in regard to advertising them for sale. I feel that Messrs. R., N. & M. have done me injustice by the manner they have introduced my name.

J. PLANT, 5 Burling-slip.

New-York, March 4th, 1846—1t.

EAGLE PLOWS.

THE genuine Eagle Plow, made by Ruggles, Nourse & Mason, is for sale at the Albany Agricultural Warehouse. All sizes adapted to different soils and purposes. E. COMSTOCK & Co.

April 1.

FOR SALE.

A FULL blooded Narragansett, *entire* Horse. This breed has been in the family of the late Governor Jay, for the last century. They are *rackers*, and not *pacers*. He is the only *entire* horse of the breed which is left. He is very fast; will *rack* his mile within three minutes. Horses of this breed are highly esteemed as saddle horses for gentlemen and ladies, and bring a high price. Apply to JAMES R. DEY, No. 51 Liberty-st, N. York

April 1—1t.

CENTER-DRAFT PLOWS.

THE subscribers keep for sale a full assortment of Prouty & Mears' Center Draft Plows, of all sizes and prices. Farmers in want of these plows will have them forwarded promptly by sending their orders to us. E. COMSTOCK & Co.,

April 1. Albany Ag. Warehouse, 23 Dean-st.

THE "DIAMOND PLOW," (received the 1st premium of State Ag. Society in 1844—'45,) is kept constantly on hand at the Albany Ag. Warehouse. E. COMSTOCK & Co.

THE "TELEGRAPH PLOW," a light and beautiful plow for cross-plowing, &c., as well as for green sward. A supply always on hand at the Albany Ag. Warehouse.

April 1. E. COMSTOCK & Co.

SEED AND PLANT STORE,

WHOLESALE AND RETAIL,

No. 31 *Fulton-st., New-York, and Sing Sing, Westchester County, N. Y.*

GARDEN and Field Seeds, Flower Seeds and Green House Plants, Clover, and other Grass Seeds, Bird Seeds, Split Peas, Garden Matts, &c. Assortments of Garden Seeds suitable for country stores, or for a southern market.

Fruit Trees; Shade Trees, either from the forest or the nursery.

Agricultural and Garden Tools of every description. Wire manufactures, &c.

Orders from a distance faithfully put up and promptly forwarded.

April 1—1t.* ALEX. WATSON.

POUDRETTE—NEW-YORK COMPANY.

A SUPERIOR article of poudrette, prepared in the most careful manner, by the New-York Company, (the first established to prepare the article, in this country,) may be had on application, either by letter or personally, at the office, 23 Chambers-street, N. Y.

☞ It is hardly necessary to say that poudrette, as a manure where transportation constitutes a part of the cost, will be found the cheapest, as *one bushel* of it, when properly prepared, will produce as much corn, or potatoes, or *any other kind of vegetation*, as *twelve or fourteen* bushels of farm-yard manure. This has been repeatedly tested in various parts of the country.

☞ Orders enclosing the money—two dollars a barrel for six barrels or under—and $1.75 per barrel for *seven* barrels and over. Letters should be addressed to D. K. MINOR, Agent,

April 1.—2t* 23 Chambers-st, New-York.

AMES' SHOVELS AND SPADES, by the dozen or retail, at the Albany Ag. Warehouse E. COMSTOCK & Co.

April 1.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. III. ALBANY, MAY, 1846. No. 5.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

UTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5—FIFTEEN copies for $10,00—all payment to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

OFFICE IN NEW-YORK CITY, AT

M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,

where single numbers, or complete sets of the back volumes, can always be obtained.

☞ "The Cultivator" is subject to newspaper postage only. ☜

ANALYSIS OF CLOVER,

……

Being the results of an investigation by MR. HORSFORD, *now of the Giessen Laboratory, Germany.*

THE following paper, received by a gentleman in this city from Mr. HORSFORD, was read, illustrated with diagrams, by Prof. HALL, at one of the weekly Agricultural Meetings, held at the Capitol, during the past winter. It is a valuable document, and will be found of interest, not only to chemists and men of science, but to readers in general;—the conclusions deducible from the analysis, agreeing precisely, as will be seen, with known practical results.

……

IN the progress of the last term, while other chemical labor was going forward, I made an ash analysis of red clover, and accompanied it with a little investigation which I will record below.

To the latter I attach, in its isolation, no especial value, inasmuch as the circumstances in which it was conducted deprive it of perfect scientific exactness. I make it the basis, as you will observe, of explaiinng one or two chemical processes.

It is well known that the juice of clover heads contains more or less sugar. The nectaries of the fully developed head are especially rich in a honey-like liquid which bees gather. In cutting the clover, when the heads are fully formed but not ripe, the sugar of this honey must be secured. The water will evaporate, leaving the sweetness with the vegetable fibre, and other organic matters, to be fed to stock. If the clover be cut before the heads begin to develope, the sugar, if formed, must be in the stems and leaves. If not cut till the seeds are ripened, the sugar may have accomplished one of its supposed ends—that of keeping up a higher temperature within the seed, for the elaboration of its various parts—and thereby have been destroyed.

It was my purpose to learn how much sugar—or rather, the relative amounts of sugar there might be at the above named three stages of the development of clover. Experiments with the first two kinds were made. The clover crop being no where permitted to ripen, I was unable to submit the inquiry concerning the third to the test of experiment.

I cut clover exactly at the surface of the soil, on the 16th day of June, just as the tufts of leaflets enclosing the heads were discernible. These I chopped to fineness, and placed a weighed portion in a flask, connected through the medium of a chloride of calcium tube, with a Liebig's potash apparatus, having previously thoroughly mixed with the clover a small quantity of fresh, carefully washed beer yeast, and covered the whole with water. Fermentation went briskly forward for several days.

On the first of July, when the heads were fully developed, I cut another portion, and having finely chopped, weighed, and mixed with the yeast and water, connected all with a potash apparatus, as above.

Without, or beyond both the potash tubes, were tubes of hydrate of lime, to prevent the absorption of carbonic acid from the air. This diagram displays the connections. [See diagram, top of next page.]

On the 30th of July, the fermentation being quite closed, the potash apparatus of the last mentioned, had increased in weight by 1.15 per cent. of the whole weight of clover subjected to fermentation. The first mentioned had increased only by 0.80 per cent. Thus the amount of carbonic acid evolved from the mass last cut, was almost half as much more than that from the quantity first cut.

It may be well, since I have introduced so many expressions betraying the laboratory, that I endeavor to explain the mode by which I hoped to learn the relative amounts of sugar in the two kinds of hay.

Most persons are familiar with the fact that distillers ferment large quantities of grain to obtain alcohol. The process to which the grain is subjected, effects a decomposition of the sugar of the grains into carbonic acid and alcohol.

The sugar susceptible of this decomposition is grape sugar—that to which the sweetness of apples is due, and which is manufactured in immense quantities on the continent, from the starch of potatoes. Its composition, determined from analyses, is

Carbon,.. 12 atoms,
Hydrogen, 12 "
Oxygen,.. 12 "

Or in the language of Chemistry, $C_{12}\ H_{12}\ O_{12}$
If we take from this four atoms of
carbonic acid, $(=CO_2,)$....... $C_4\ \ O_8$

there remain,................... $C_8\ H_{12}\ O_4$=2 atoms of alcohol; the composition of alcohol being,........ $C_4\ H_6\ O_2$

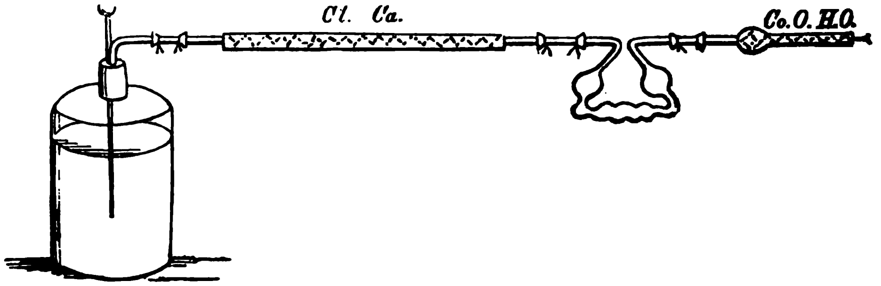
The alcohol becomes the "high wines." The carbonic acid floats over the fermenting tubs.

Thenard has shown, by distilling and collecting the alcohol, and weighing the carbonic acid arising from the decomposition of a given weight of sugar, that the weight of the latter, and the sum of the weights of the former equal each other.

The alcohol may be permitted to go directly into acetic acid, as takes place with fruit when exposed to air, or continued as such by excluding the air.

Vinegar has the following composition:—$C_4\ H_8\ O_2$. In order to its formation from alcohol, three atoms of hydrogen must be taken away and one atom of oxygen added.

This takes place quietly and slowly in the cider,



wine, and beer casks, as well as vinegar pipes, with which all are familiar.

The housewife, to keep the vinegar on the increase, adds wine, or whiskey, or cider, or maple sap, or molasses. All these contain sugar or alcohol. The sugar is resolved into alcohol and carbonic acid. The alcohol, however, does not continue as such, if the liquid be exposed to the action of the air, but goes into vinegar, or acetic acid.

These decompositions have now been so much and so clearly studied that the results are perfectly understood. The causes of the decomposition are still matters of discussion.

To return. The carbonic acid, to whose addition, the increase in weight of the potash apparatus is to be attributed, speaks a certain amount of sugar, from which it was derived. The larger per cent of carbonic acid corresponds to a larger per cent of sugar.

I will add the analyses of the ashes. From them you may see one of the parts that sulphate of lime plays in the development of clover.

You may remember that Franklin, anxious to convince our countrymen of the efficacy of gypsum as a manure, strewed a few handfuls of it in the form of large letters upon a clover field. In a few weeks the plants that had received the benefit of this manure, had so far outgrown, and had taken on a color so much deeper and richer than the others around, that the wonder of passers by was naturally excited.

It was the ashes of this plant that I analyzed.

Of the whole plant in its green state, the earthy ingredients or inorganic constituents, equal, merely,	1.83 per cent.
Of the leaves,	1.75 per cent.
Of the stems,	1.40 per cent.
The water in the green clover, determined by two experim'ts, gave,	83.55 and 83.58 pr.ct.
Of the dry plant altogether the per cent. of ashes was,	11.18 per cent.
Of the leaves,	10.69 per cent.
Of the stems,	8.52 per cent.

No. 1.		Ingredients of the ashes.	No. 2.
Ko*	= 12.164 =	Potash,	= 16.101
Na	= 1.414 =	Sodium,	= 1.874
Nao	= 30.757 =	Soda,	= 40.712
Cao	= 16.556 =	Lime,	= 21.914
Mgo	= 6.262 =	Magnesia,	= 8.289
$Po_8+2fe_2O_3$	= 0.506 =	Phosphate Iron,	= .670
Cl	= 2.159 =	Chlorine,	= 2.856
Po_5	= 2.957 =	Phosphoric acid,	= 3.915
So_3	= .801 =	Sulphuric acid,	= 1.063
Sil_3	= 1.968 =	Silica,	= 2.605
Co_2	= 22.930		
Sand and coal	1.244		100.000
	99.718		

The first table contains the direct per cent results of the analysis. Table No. 2, the per cent results, deducting the carbonic acid, coal, and sand.

In glancing at the results of the analysis, we see how large a part is made up of potash, soda, and lime. The sulphuric acid is there. Without its presence in the soil it could never have gained a place among the tissues of the plant. If it be an essential *irreplaceable* ingredient, as phosphoric acid is in the seeds of wheat and corn, it is readily seen how Franklin's selection of clover may have been peculiarly happy. I do not pretend to say it is indispensible. A series of experiments and accurately conducted analyses only, could settle such a question.

The sand was probably spattered upon the stalks by rain, and a certain amount of coal remained, with the most careful and long continued burning.

The large proportion of carbonic acid is particularly worthy of attention. Comparing it with the sum of all the other acids—the phosphoric, sulphuric, silicic, hydrochloric, of which the chlorine is given, we see how far it exceeds them. Again, glancing at the per cent. of bases, we see how very large the proportion when compared with the sum of the inorganic acids. This surplus of base was most of it united to organic acids. These, in the burning of the plant, have been destroyed. Their place has been taken by carbonic acid, or for the most part. Here is nearly 23 per cent. of carbonic acid.

In an analysis of the ashes of sugar cane, made here last summer, there was not a trace of carbonic acid. Such is the difference. In the sugar cane, the per centage of silica was large. Timothy grass ashes gave also no carbonic acid, but a large per cent. of silica.

Setting together some of the results of this little investigation—

The moisture of green clover amounts to 83.5 per cent.

The clover contains a certain amount of su ar—a body capable of fermentation.

What hints come to the farmer from these two facts?

If the clover be taken to the mow with this weight of water, the fluid among the fibres of the stalks and leaves, will permit that intestine motion necessary to fermentation; and not only will the sugar be lost, but vinegar will be formed, souring the whole mass, and rendering it unpalatable for stock.

If it be properly dried, on the other hand, the sugar as such, will remain with the vegetable fibre, and go to nourish the stock, furnishing horses and cattle with an element whose combustion serves to keep them warm.*

But again—leaves contain 10.69 per cent. of ashes, while stems contain 8.52 per cent.

Now, as these inorganic matters are more or less serviceable in the animal economy, the leaves containing most of them should particularly be preserved, and as the ashes of the whole plant, including the head, have 11.18 per cent. of ashes, it is clear that the preservation of the heads and leaves are decidedly more important than that of the stems.

Hence the farmer cuts the clover, and instead of parching it in the sun, as in many places, cocks it for a few hours, that the vapour evolved from within in the process of drying, shall keep the stalks and leaves without, from becoming too suddenly dried and unnecessarily brittle.

In closing this communication, I will state one of the results to which the experiments of Professor Liebig are daily leading.

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* To those unacquainted with chemical symbols, it may be as well to remark, that the signs "Ko," "Na," &c., are explained by the terms "Potash," "Sodium," &c.—Ed.

* The discussion between Dumas and Liebig relative to the formation of fat from sugar, has been settled in favor of the latter, by a repetition, on the part of Dumas, of the experiments made several years since by Liebig.

In the spring preceding my arrival in Giessen, the Prof. planted some grape scions under the windows of the laboratory. He fed them, if I may use such an expression, upon the ashes of the grape vine,—or upon the proper inorganic food of the grape, as shown by analyses of its ashes. The growth has been enormous, and several of the vines bore large clusters of grapes in the course of the season. Indeed, I know not but all, as my attention was drawn to them particularly only since the fruit has been gathered. The soil otherwise is little better than a pavement—a kind of fine gravel, in which scarcely anything takes root.

I was shown pots of wheat, in different stages of their growth, that had been fed variously,—some upon the inorganic matters they needed, according to the analyses of their ashes—others had merely shared the tribute of the general soil. The results in numbers I don't yet know. In appearance, no one could be at a loss to judge of what might be expected.

I may mention in this connection, that I gave Prof. Liebig five varieties of American corn, all of which were planted, but not one of which came to maturity, though the first frost in Giessen was about the 20th of October. The climate is essentially different from ours. I think the heat of summer with us must be more intense.

The experiments of Prof. L., which I have alluded to above, are full of interest, not alone as sustaining the views he has expounded, but as also showing that the treasures in the shape of inorganic manures, heaped up in some quarters of the globe may be made to equalize the fruits of labor in other regions.

The salt plains of our western territories, may have yet a part to play in enriching soils wide removed from them; and lands condemned to support a few dwarfish evergreens, may hereafter be found blooming with varied and rich vegetation, the reward of rational agriculture.

PLOWING.

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Mr. Editor—Franklin uttered as much truth as poetry, when he said—

> Plow *deep* while sluggards sleep,
> And you shall have corn to sell and to keep.

Some may not acknowledge the full force of the words, "while sluggards sleep"—that is, they may not think there is much benefit to be derived from plowing *in the dew;* be that as it may, such notions are incentives to early rising and industry, if nothing more. But if that does not suit, have it in this way:—

> Plow deep, and manure well,
> And you shall have corn to keep and to sell.

Deep plowing, with a corresponding quantity of manure, is now universally recommended by our best farmers.

But there is another subject—the manner of *laying* a furrow on which there is a difference of opinion—some contending that it is best to lay the furrow perfectly flat, and others, that it should be laid as nearly as possible at an angle of 45 degrees; now both methods are best in different circumstances.

If the soil is light, sandy, and not inclined to wetness, the flat method is altogether the best, but in a soil of a contrary description, as many of our lands are, the 45 degree furrow is to be preferred.

Much more labor than is necessary is frequently expended in preparing the ground for a crop. I would not be understood as saying that one plowing is sufficient under all circumstances, but in a tenacious soil, it is often good economy to let the ground rest a considerable time between the plowings. Intead of plowing a piece of tough green-sward three or four times in the spring, when the team is comparatively weak, to prepare it for a crop, let it be neatly plowed in September, then lie until spring, and a couple of agents will come, while you and your team are asleep, and pulverise it for you, and do it better than you can and do it for nothing too. Do you inquire the names of those two clever fellows? The name of one is *fermentation*, and the name of the other *frost*. Highlander.

New-Lisbon, Jan. 24, 1846.

THORN HEDGES.

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L. Tucker, Esq.—There have, of late, occasionally appeared in your paper, articles in reference to hedges. As this indicates a rising interest on the subject, my giving you the result of my experience on it, may not be unacceptable to you.

Hedge enclosures are highly ornamental to a country. They are beautiful as mere visual objects, and the impression of their beauty is enhanced by the ideas they suggest, of shelter, and comfort, and unison, with the natural clothing of the land. When properly trained, they are besides, durable and efficient fences. In a new country, ornament, it is true, must be a secondary consideration, and where timber is abundant, no kind of enclosure can, in point of utility, excel the common rail fence. It is easily and speedily put up, easily kept up, and easily removed; while a hedge requires years of care and labor. There are, however, regions of the states in which timber is scarce, and in all situations, ornament to some extent may be desired. It is, in consequence, important to know what plants are most suitable, in this part of the world, for the purpose of forming a hedge, and the best mode of rearing them into such a fence.

In turning my attention to the subject, my object was to enclose my garden, orchard, and house-yards, with something more pleasing to the eye than rails or boards. The British Hawthorn, so extensively used for fencing in its native country, might have answered my purpose; it could have been procured in the eastern nurseries, or by importation,* or might have been raised from the seed, which vegetates freely; but being aware that even where indigenous, it is susceptible of injury from drouth, and seeing that the specimens of it I had met with in this country, never appeared to assume their native verdure, and were often scathed and blighted, I fixed on one of the American thorns, the *Crataegus Crus-galli*, (Eaton,) or Cock-spur thorn, which, from the beauty of its shining leaves, and the style of its growth, seemed well calculated to serve the purpose in view.

My first attempt to raise it from seed was quite unsuccessful. Out of perhaps a peck sown, one plant only came up at the end of two years. I then gathered the seed in the fall, placed it covered with litter and earth, in a hole dug in the ground, where it remained until the fall succeeeding, when it was sown in a bed in the garden. It did not vegetate in the ensuing spring, but in the next it did, in considerable quantity, and still more so in the following; that is, two and a half and three and a half years after being taken from the tree. It is probable that this very objectionable difficulty, in getting the seed to spring is not insuperable; for on one occasion, I put a small quantity of it with earth into a flower-pot, which was kept watered all winter in a warm room, and though taken from the tree, the preceding fall, some of it had vegetated before the commencement of spring. This fact points to a remedy of the difficulty, but I did not make any further experiments in raising plants from seed, having found a more easy way of supplying all I required. Under two aged trees of the species in question, I discovered that in the end of April or beginning of May, an abundance of plants, destined to be afterwards browsed by cattle, or smothered by the grass, rose from the seed that had previously fallen. These I transplanted while many of them were only in the seed leaf, and with complete success. By this very simple process, I procured in one season, above a thousand plants.

At one year old the plants ought to be transplanted, and their tap roots pruned, that they may be kept clear of weeds, and that their roots may be better prepared for ultimate removal to the hedge. They will be in the best state for use at three years old, though if growing freely, they may answer well enough at two. When planted in the hedge, they should be cut over, within three or four inches of the ground, which will induce a fresher and thicker growth than if the whole top were allowed to remain. If a luxuriant growth is desired, it need hardly be said that the ground before planting, should be deeply dug and enriched, and in every case, it will conduce to ecocomy in the ultimate object of having a fence, that the ground should be made as free as possible of the creeping rooted grasses. While the plants are unable to protect themselves, all weeds must be extirpated.

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* Some sent here in 1841, though they did not arrive till the month of June, and had sprouted on the voyage, yet grew.

Around my garden the hedge stands on the level surface. Elsewhere I have deviated slightly from this mode. The most common way of making a hedge in some parts of the old world, is by cutting a ditch with sloping sides, four feet wide at the surface, and eighteen inches deep, and forming the materials taken from the ditch, into a bank on one side of it, about half way up the sloping face of which, the thorns are planted. A cross section of the work when finished would appear thus. This manner of construction has several advantages, but in our climate the atmosphere is too dry in summer, and the frost to severe in winter to admit probably, of its adoption. In its stead, I have cut a ditch with sloping sides, of only eighteen inches deep. On one side, the turf is set up with its green surface towards the ditch, and beaten with the spade into a slope corresponding with the side of the ditch. The earth from the ditch is thrown in at the back of the turf previously to its being beaten, and made to slope gradually from it. The top of the turf is brought to a regular line, and the thorns are planted eight inches above the level of the bottom of the ditch, and thus the fence is made a little more formidable, while the ditch may serve for leading off the surface water from the cultivated space enclosed.

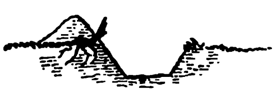
Fig. 40.

A fence strong enough to resist cattle requires that each individual of the hedge have a stem of considerable thickness, and therefore the plants should not be placed nearer than a foot asunder. If planted nearer they stretch up weakly, and are apt to injure each other, the weak deteriorating the growth of the strong, and the strong killing the weak. Much pruning tends also to dwarf the stems, and should be avoided, because when the stems have attained sufficient size, the hedge can be reduced in height and width to what is desired. The most expeditious instrument for the purpose of pruning is a slightly curved knife, with a keen edge, about ten inches long and two broad, fixed by a hose, on a handle three feet long. In this operation, the only points necessary to attend to, are, that the upper branches shall not hang further out than the lower, and that the more vigorous plants shall not overtop those that grow beside them. In this way, when a hedge is pruned at the end of a season, its form will consist of a straight line on the top, and sides sloping inwards from the bottom to a point at the top. If the sides be left perpendicular even, the upper branches will injure those below them, and the hedge become thin at bottom. The conical form is besides more graceful in appearance—it is, in all trees, the style of nature.

I do not pretend that my modes of procedure are the best, but I have great confidence in stating that in the C. *crus galli*, we possess a native tree admirably suited for making a fence. I have tried several of the other species of native thorns, none of which seem, in suitableness, deserving of comparison with it. The *C. coccinea* stands nearest to it in the requisite quality of thickness of the growth of its branches, and has a handsome foliage. The *C. punctata* would make a beautiful hedge, grows very thick under cutting, and is very early in leaf, but it is deficient in strength and in spines. The formidable spines of the *C. latifolia* induced me to use it, in making one part of the fence connected with my garden. Its tendency, however, to upward and tree like growth, in defiance of the knife, is so great, that I have determined to substitute the *Crus galli* in its place. The latter has every requisite for a fence, and appears, in some respects, to surpass the Hawthorn even, in its most favorable localities. Its spines are longer, sharper, and more numerous than those of the Hawthorn; it has fully as great a tendency to a branchy style of growth; being a native, it is adapted to the climate; and in addition to all these recommendations, its splendid foliage renders it in the highest degree ornamental. I have reason to think too, that it is less liable than any other thorn to be bruised by cattle, a matter, if true, of great importance while a hedge is young. The branches of the two fine specimens mentioned above, hang down in a thick mass to the ground, though in a situation to which cattle have at all times had free access. The only objection to its use is the resistance of its seeds to vegetation. It would be needless to speculate on what artificial means might be tried to bring it to germinate in a shorter time and with more certainty. I shall only add that the ground in which, in my experiment, the seed was sown, proved too tenacious. Though the weeds were kept down with the Dutch hoe, it became unfavorably compact. Were I to make another attempt of a similar kind, I should sow in drills in a bed of vegetable mould of the loosest description, and then, in time, a full crop might be depended on, which, as it rose, could be transplanted in the autumn without disinterring what seed had still to spring. JOHN RANKIN.

Canandaigua, March 14, 1846.

KITCHEN CHEMISTRY.—No. II.

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HEAT.

Principles.—The heat of bodies may be affected in various ways, among which are, by conduction, by radiation, and by the conversion of solids into liquids and liquids into vapors. 1. The *conduction* of heat through bodies is familiar to most persons. If a short rod of iron be held in the fire, the heat passes along it, until the whole is gradually more or less heated. But if a rod of wood or earthen ware is similarly placed, it becomes warmed through its length in a very small degree. Hence, iron is a good conductor, and wood and earth, bad. Iron feels colder on a cold day, than wood, by conducting the heat more rapidly from the hand, though the actual temperature of the two substances may be the same. Hence the reason that red hot iron burns more evenly than burning charcoal.

2. Air is a very bad conductor, yet on standing before a fire, heat is felt at a considerable distance, being thrown out in straight lines from the fire by *radiation*—in the same way that rays of light are radiated in straight lines from a candle.

3. If a small vessel be filled with snow on a very cold morning, say at 10 degrees Fah., the immersion of the thermometer in the snow will show that temperature. Apply the heat of a lamp to the vessel, and the thermometer will rise as the snow becomes warmer, till it gets up to 32 degrees, (the freezing point,) when it will remain perfectly stationary till all the snow is melted. It is found that the time thus required to melt the snow, would have heated an equal weight of water up to 172 degrees, or 140 degrees above freezing. That amount of heat has therefore disappeared or become *latent* to melt the snow. Continue the heat of the lamp, and the thermometer will rise till it reaches 212 degrees, when the water will boil; it then remains stationary till all the water has boiled away. It has been found that the time required to evaporate all the water would have heated it to 1212 degrees, or that 1000 degrees of heat has disappeared or become latent to convert the water into steam. The heat required for liquefaction, is also shown by mixing an equal weight of snow at 32 degrees, and water at 172 degrees; the snow all melts, but the resulting liquid is only 32 degrees, the 140 degrees of the hot water having gone to melt the snow. A vessel of water in freezing, is con-

stantly giving out heat, but the temperature does not lower till it is all frozen, as it is the latent heat only that is passing off.

Application.—The applications of these principles are very numerous and important, some of which, here mentioned, may not strictly appertain to the kitchen.

1. Metals being good conductors, they are best for vessels over the fire, the heat passing readily through, to the substances contained in them. Hence, too, why copper, which is one of the best conductors, is employed as the heating-rod or tube, for lard lamps. Wood, being a poor conductor, is advantageously used as a handle for vessels and tools which become heated, by not burning the hand. Hence also, the reason that earthen-ware tubes are best for the insertion of stove pipes, through wooden partitions, when metals by conducting the heat rapidly to the wood, might set it on fire.

2. Different substances and surfaces *radiate* heat very differently. Light and porous bodies usually throw it off from themselves, much more rapidly than heavy and compact ones; and smooth and polished surfaces more rapidly than rough surfaces. Hence the heat thrown off from a large fire of burning wood and charcoal,—porous substances—burns the face more than the heat from a metalic stove, not a porous substance. Polished metals radiate very slowly; hence water will remain hot much longer in a tea-pot, kept bright and polished by the neat housewife, than in the tarnished tea-pot of the careless one. For the same reason, pipes for carrying heat by hot water or hot air furnaces, should be bright, in order that none may be wasted on the way, till it reaches the place of destination. Hence also the reason why stove pipes and drums made of polished Russia iron, do not throw off so much heat as iron whose surface is rough, or rendered porous by blacking.

Substances radiating freely, absorb also freely; and those radiating little, absorb little. Hence the reason that a polished tin plate, placed under a hot stove, or beside it against a wooden wall, remains cold, and protects the wood. Hence also, as every cook knows, a bright baking tin will not absorb heat and burn the bread as a blackened one will; and indeed it often prevents the proper degree of baking, which is at once obviated by giving it a slight coating in the smoke of a lamp. A new tin boiler, over a clear and hot charcoal fire, failed to boil water at all; the reason being suspected, a few shavings of pine were thrown in to smoke the surface,—when the water soon boiled rapidly. Hence the utility of the thin coating of soot which forms on the bottom of boilers.

3. Boiling water, (in all ordinary cases,) being always at 212 degrees Far., it is obvious that a pot of potatoes will cook just as fast when boiling slowly as when boiling very fast; hence the notion of cooking a boiled dinner faster by a very hot fire, is founded in error, and only wastes fuel. The great amount of latent heat carried off by steam, renders it important to keep boiling vessels closed by metal covers, which condense steam, and return in part the latent heat. Covering newly baked bread, by a cloth, condenses the rising steam in the same way, and keeps the crust soft. It is the amount of heat required for evaporating water, though by the slow process at common temperatures, that occasions the cooling process of sprinkling rooms in hot weather. The more rapid evaporation of ether and alcohol, render cooling by these substances more effectual and rapid. Baked potatoes remain long hot; but if the skin be broken, to let out the steam, they soon cool by the passing off of the latent heat of the steam.

Were it not for the latent heat required to convert snow into water, warm weather would dissolve at once our snow-banks into liquid, and tremendous inundations would be the consequence. From a similar cause, the water in the dinner pot is not boiled off at a flash, and the dinner spoiled.

Water freezes sooner than many other substances; hence often the water freezes and leaves them when they are mixed or in solution. Hence the ice mountains of the polar seas are fresh; and hence the concentration of vinegar, lemon juice, and maple sap by freezing.

THE YELLOWS.

Mr. Tucker—The yellows in peach trees, is a subject that still continues to be interesting in this part of the country. I wish, therefore, to communicate a fact which may be of some importance in our inquiries after the cause of that disease.

Four years ago, Mr. B. Silliman, Jun., of this city, procured from Liverpool a considerable number of young peach and nectarine trees, *budded on plum stocks.* Some of them were put for standards and others walled upon a board fence. There had been no peach trees for twenty years on the ground where those were planted. They grew well the first season, and appeared in perfect health. The second season some of the *peach* trees showed symptoms of yellows, and died the third season. At the present time, (February, '46,) no one of the trees, either nectarine or peach is free from disease. In the garden adjoining that of Mr. Silliman there were diseased trees standing at the time the imported trees were planted out.

The following inferences may perhaps be safely made from this experiment.

1. Budding on plum stocks, is not a security against the "yellows."

2. The plum tree has not hitherto been known to be liable to the disease. We may therefore conclude that the disease commenced in Mr. Silliman's trees in the *peach* and not in the *plum* portion—that is, in the *top*, and not in the *root*. This furnishes a strong probability that it is the natural course of the disease to commence and be seated primarily, in the part of the tree above ground.

3. The disease did not arise from anything inherent in the trees, but from some cause external to and disconnected from them. The ground of this conclusion will not be apparent without taking in connection with what has been stated, the fact, that the "yellows" is unknown in England. This conclusion bears pretty directly upon an important theory, which has been very ably presented to the public in a recent work, and met with a favorable reception. The theory is thus stated:—The yellows is "a *constitutional taint,* existing in many American varieties of the peach, and produced in the first place by bad cultivation, and the consequent exhaustion arising from successive over-crops. Afterwards it has been established and perpetuated by sowing the seeds of the enfeebled tree."

It is most sincerely to be regretted that any fact should present itself, that seems irreconcilable with a theory, which offers to us, if correct, so ready and sure a means of having healthy trees. According to the theory, trees procured from regions where the disease has not appeared—England, France, Italy, China, or even our own "Great West," for example—*should* be free from disease, and *should* continue so, if planted in an unexhausted soil. Mr. Silliman's experiment leads us to apprehend that we are not in that way to escape the evil.

To see that we make no unwarranted conclusion, let us advert to the facts and circumstances involved in this trial of foreign trees. It is well known that the "yellows" has not appeared in England. Mr. Downing, ("Fruits and Fruit Trees of America," p. 467,) states a further fact, that "notwithstanding the great number of American varieties of peach trees that have been repeatedly sent to England, and are now growing there, *the disease has never extended itself there,* or been communicated to other trees." Peach trees in England, therefore, have *no constitutional taint,* that makes them liable to the "yellows;" and if they remain there they never take the disease. But bring these trees to New Haven, and in fifteen months after their arrival they are dying with the "yellows." There must therefore be *something* here which is not there. The disease shows itself too soon after the trees reach this country to admit of the supposition, that the exhausting processes, said to be peculiar to our climate and practices, have an agency in producing it. Must we not suppose the disease to be connected somehow with *place* rather than *condition?* It matters not where our trees or seeds come from—Liverpool, Flushing, Newburg, western New-York or Ohio—if planted out in New-Haven or its vicinity, either in light sand, or deep, rich loam, they die of the "yellows;" some in one, some in two, all in three or four years.

The inference from all this seems unavoidable, that the cause of the disease has existence independent of the constitution of the trees. What this cause is, where it is, what it is attached to, what it emanates from, thousands besides myself are waiting and watching with anxiety to know. Many facts, which cannot now be detailed, show satisfactorily that the presence of a diseased tree among healthy ones, has some deleterious influence, direct or indirect, upon the health of its neighbors—but in what way, we are as yet unable to say. Our best mode of guarding our trees against this destroyer is in conformity with this idea of a communication of disease from one tree to another; which is, to *exterminate diseased trees, and replace them with such as are healthy.* It is found in practice desirable that the extermination should extend to *all* affected trees, leaving none. And the greater the territory over which this measure is enforced, the better. I cannot, from my own experience, say confidently that it makes any difference whether the trees are rooted up when in full leaf, or after the leaves have fallen. NOYES DARLING.

New Haven, Ct., Feb. 10, 1846.

CORN AND COB CRUSHER, &C.

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MR. TUCKER—Suffer me to say a few words—

1st. In regard to "Hussey's Corn and Cob Crusher." I purchased one from the maker two years since, but from various causes, did not get it in operation until last fall. I am much pleased with its performance, and believe it will accomplish all that is promised for it. In addition to the crushing of the corn and cob, I have made a hopper for it, by the aid of which I have for several weeks been grinding shelled corn and peas for my fattening hogs. It grinds beautifully and rapidly, and by putting the hominy in soak with boiling water, my hogs eat it more readily, and I think fatten faster than they have ever done by any previous process. I think the machine worth the money and trouble expended, if for no other use than this. I see that a competitor has entered the lists with Mr. Hussey. I mean Pitts, and he promises much for his Crusher. I have seen an account of it but not of the manner of its operation or its price; should like to see both.

While on the subject of crushers, I notice a remark of yours in the Dec. No., in reply to "A Subscriber," (Greenville, S. C.) p. 389, where you say that you "presume it is better to grind the article in mills calculated for the purpose," and the idea is suggested, that the "cob injures the mill stones." I only notice this to say, that there is an invention in North Carolina, and for sale by the Comptroller of the State, which professes to grind *cob, corn,* and *shuck,* all together, which is adjusted upon the ordinary mill stone, and which the inventor says, I think, will not only not injure the stone, but will accelerate its speed in grinding meal. I have not seen one of them in operation, but from the statements made, must be valuable.

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THE SWEET GUM

2nd. Please say to your correspondent Solon Robinson, whose "Notes of Travel" always interest me, that if he will visit me in North Carolina, I will prove to him by occular demonstration that the "sweet gum's only value is" not for making tea for "bowel complaint," but it is well adapted to other purposes. During the past summer I have made considerable use of the timber for building, and it is one of the prettiest woods, and is susceptible of as fine a polish as any wood in the southern states. There is now before my eyes some panelling of this wood, and the beautiful waving of the grain is almost equal to Mahogany. There is indeed an objection to it, and that is its tendency to warp, but by proper attention, this may be guarded against. ••••••

SOAKING SEEDS IN AMMONIA.

3d. Permit me to corroborate a statement made by a correspondent of yours at Princeton, N. J., p. 311, in reference to the soaking of seeds in Ammonia. Like him, I was induced to take the bait, and like him, found by experience, that every new born theory is not reducible to successful practice. At the time of sowing oats last spring, I steeped one bushel in the prescribed quantity, and endeavored to follow the directions of Mr. Campbell as literally as possible. The result was, that not one fifth of the seeds came up, and those that did, were but little if any better than their neighbors.'

I think Mr. Campbell, and the Highland Society, must try again. But I do not regret the experiment, as it is the only way we are to find out the excellent and the worthless. I hope your friend at Princeton will not be discouraged. Truly yours,

WILL: H. WILLS.

Rocky Hill, N. C., 27*th Dec.,* 1845.

SPECIAL MANURES.

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No one who has expended the large sums required by stable keepers for manure, can fail to be interested in the subject of special manures. 'The idea conveyed by this term is that certain fertilizers are peculiarly adapted to particular plants or soils. Thus we know that plaster of Paris is often extremely beneficial to clover. Experiment and the better established opinions of practical men have shown that clover is not the only crop that is brought forward in a marked degree by a particular and simple manure. There is an abundance of evidence to show that potatoes if not increased in the crop produced, are at all events much improved in mealiness and flavor by a free use of lime. Ashes, and especially those which have been leached, are well known to improve the grass crop in a marked degree.

Other instances of less agricultural importance might be cited, as the action of salt on asparagus, and of lime on apple and pear trees.

From the preceding remarks will be understood what is meant by a special manure; but there are several points pertaining to this subject worthy of a short consideration.

In the first place—are the special manures economical? This is with the farmers of the sea-board, of primary importance, for our soils cannot dispense with manure, and that from the farm-yard is so expensive as to consume all the profits. To answer this important question, it is necessary to consider what yard manure in its agricultural operation really is. It is a compost made up of organic and saline parts, or, in other words, of a very rich vegetable mould, and of common salt, plaster of paris, bone earth and mild lime, or salts similar to these. In the form that it comes to the farm it also contains much water, and is liable to fermentation, which gives out heat, useful in market gardening, but of less importance to the farmer. One hundred parts of yard manure in the ordinary state, contains 79.3 parts of water, 6.6 parts of earthy and saline matters, and 14.1 parts of vegetable mould. *(Gardner's Farmer's Dictionary.)* So that when we haul out 1000 weight of first rate farm-yard manure, we carry to the field 793 lbs. of *water;* 66 lbs. of earthy matters as salt, gypsum, and bone earth, and 141 lbs. of vegetable matter. It will therefore take 1333 lbs., or two thirds of a ton, to yield one hundred lbs., or less than a bushel of saline and earthy matters. The exact proportions of the salt, gypsum, &c., in the earthy matters of yard manure will depend upon the litler used. In the case of wheat straw there will be in 100 lbs. only about 8 pounds of bone earth, 3 pounds of gypsum, and f lbs. of salt, 15 lbs. being mild lime, and the rest common sand. The composition of the ashes of oats, hay, and other fodders. is also given in *Gardner's Farmer's*

Dictionary. Proceeding with the composition of the oat straw—it appears, therefore, that if we should apply to every crop yard-manure, and the fertilizing effect be due only or chiefly to the bone earth, it would have been very much cheaper to have added the bone earth at once, and not in the compost of yard-manure. If this should be the true cause of fertility, say to a crop of oats, it will be necessary to add as much as ten tons of yard manure to give to the soil one bushel of 110 lbs. of bone earth. No one will doubt that results like this do occur, when it is so well known through the pages of the Cultivator, that a few pounds of bones in a dissolved state, are capable of producing the largest crops of turneps. and some 60 lbs. thus prepared are now used in England and Scotland, in the place of the sixteen and twenty bushels formerly employed. We believe, therefore, that from the preceding remarks it is abundantly clear that the use of special manures is preëminently economical, and a great improvement in farming. But there is one condition necessary to the economical application of such fertilizers, and this is, that we have an accurate knowledge of the particular substance required by any given crop, and the conditions when it is indicated. To know when it is indicated, we must ascertain whether it be already in the soil, either naturally or by the use of previous manures; on this point we have nothing to offer at present.

How is the farmer to know what particular substances any given crop requires? This, next after the question of the economy of special manures, is the most important. A short time since it would have puzzled a wise man to have answered such a question to the satisfaction of the farmer; the answer might have been given in terms intelligible to a chemist, but we farmers are not of that craft, and probably never will be. We might have been told that there is a close connection between the ashes of a plant and the special manures it required. This connection unquestionably exists, for we know that gypsum forwards clover because both contain sulphur; lime improves potatoes, because the tops of that vegetable contain lime abundantly; turneps are improved by bone earth, because they require phosphorous, which abounds in bones. From these instances it is clear that we may ascertain what the special manures of any plant are by examining the composition of the ashes. But what are we to make out of sulphuric acid, 0.5; chlorine, 0.02, and such terms which are to be met with in all the analyses to be seen. But in the Farmer's Dictionary, by Dr. Gardner, recently published by Harper's, we find what has never before been drawn up for the farmer, an account, not only of the analysis of the ashes of all farm plants, but an interpretation of it—the special manures for each crop are given at length. For instance, under the article—"CORN—*Special Manures*,"—we have the best analysis of Indian corn given, and then, exactly what every farmer wants to know—the practical deductions from this analysis—"that a special compost of poudrette or stable manure, bone earth and ashes, would be very valuable" for the corn crop. We also learn that from the analysis of corn, "it preëminently requires putrescent matter and bone earth, without which latter the seeds are imperfect." We believe that the Farmer's Dictionary is one of the most valuable works ever published for the practical farmer. No where else is any information on the important subject of special manures to be found. The work contains also the meanings of the hard technical words, now so freely used by some writers.

New-York, 1846. C. E. McC.

BONE DUST.

……

A correspondent with the signature of "Rambler," furnishes us with an account of an experiment made by **ANDREW COE**, of Middletown, Ct., with bone dust in raising turneps. The soil on which the trial was made, is represented as being thin and worn out. Twenty bushels of bone dust was applied to the acre, and the turneps sown about the first of August. The crop was luxuriant, and is attributed wholly to the bone dust. The writer states that he measured a piece in the lot six feet square, and by computation found the product to be at the rate of 1210 bushels per acre. The field, however, he says, would not have averaged that, but would have averaged half the quantity—say 605 bushels per acre. A space left through the middle of the lot, a rod and a half wide, without any bone or any other application, produced nothing worth harvesting.

MORGAN HORSES.

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THE editor of the *Southern Cultivator*, published at Augusta, Ga., states that, by the "many glowing accounts of the great excellence of the Morgan Horse," he was induced to make arrangements for the purchase of one for the improvement of the Southern stock. The "upshot of the business," however, he says, is shown by the following extract of a letter from the person who had been commissioned to make the purchase:

"The Morgan horse has been run out these twenty years, and it is the merest gammon with jockies to talk about them. Everything in the country is now called a 'Morgan,' from the merest rat of a pony to a gaunt, long-legged, seventeen hand horse. We have what is better than the Morgan horses ever were, viz: the Messenger, Mambrino, and Duroc crosses. They are almost thorough bred, and are the most admirable roadsters that the world can produce. * * * It fairly makes me sick to see the miserable Canadian and other horses palmed off upon the south by glib fellows," &c.

This article appeared in the March number of the S. Cultivator. In a preceding number, the editor had copied the remarks of Mr. WEISINGER, one of the editors of Louisville (Ky.,) Journal, in reference to the Morgan horses. (See Cultivator for Nov., 1845.) The article from which we take the above extract, is said by the editor of the S. C., to be "intended as a sort of counter-blast" to Mr. WEISENGER'S remarks.

What the writer of the extract *means* by the expression—"the Morgan horse has been *run out* these twenty years," we do not know. If he means that the original horse known by this name has been *dead* "twenty years," it is no doubt true. If he means that *all the stock got by this horse*, have been dead this length of time, or even that they are *now* extinct, it is not true; unless Mr. WIER'S horse *Chelsea Morgan*, or *Bulrush* has died within a short time. It is true that in consequence of the great demand for this stock of horses, and the great prices they have brought, they have become scarce; and there is no doubt that "miserable" horses have been "palmed off" in many instances as Morgans; but a man who would accept a "gaunt, long-legged, seventeen hand horse," as one of *this stock*, must certainly be too ignorant of their well-known characteristics, to deserve pity for the imposition. But it is the acknowledged value of the *real* Morgans that has produced these results. It is not strange that a great demand for an article, should occasion counterfeits;—hence judgment and observation are always necessary to distinguish the genuine from the false.

That there is yet left at least *one* remnant of the progeny of the original Morgan horse, and that there are a considerable number of only the second generation from that horse, is known, and we are pleased that measures are being taken to preserve and increase this most valuable race.

As to the horses which are so much "better than the Morgan horses ever were," (!) that are spoken of in the above extract, we should feel obliged if the editor of the Southern Cultivator, or his correspondent, will tell us where they may be found. We, as well as some of our friends, are just now in want of a few of the "most admirable roadsters the world can produce."

In conclusion, we would refer the editor of the Southern Cultivator, and others who desire to know the true history of the Morgan horses, to our paper, vol. IX, pages 99, 110, vol. II, new series, (1845,) pages 256, 352, and the present vol., pages 19, (Jan. No.,) 106, (April No.)

ANALYSIS OF MANURES.

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ONE of the easiest kinds of analysis, as well as most useful to the farmer, is the analysis of manures. The fertilizing ingredients being nearly in an unmixed state, renders the determination of their proportions, much easier, than where they are widely diffused through a soil. Hence the greater ease and accuracy connected with the examination of manures over that of soils.

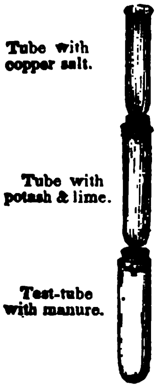

Fig. 29.)

The introduction of new manures renders a chemical examination often of advantage. The following method of ascertaining the amount of ammonia in any substance, and constituting a very important part of the analysis of manures, is condensed from the London Gardener's Chronicle, and appears to be simple, expeditious, and accurate. It is used in the examination of guano.

A common test tube (about 5 inches long and half an inch in diameter, and represented as the lower of the three tubes in the figure,) is taken, and a portion of the guano or other manure to be examined, is accurately weighed and introduced into it; 25 or 50 grains will be found a convenient quantity. A similar tube, but drawn at its lower end to an open neck, is then attached to the test tube by means of a perforated cork; a few fragments of asbestos are placed in the neck, to prevent its becoming choked, and it is then filled with caustic potash mixed with fragments of lime. Another tube, similar to the last, is then placed in like manner above, and the neck being also provided with asbestos, the tube is filled with coarsely powdered chloride, sulphate, or nitrate of copper, previously well dried. The three tubes, with their contents, having been weighed separately, the lower one containing the manure, is placed in a water bath, until all moisture is expelled. The moisture is all absorbed by the caustic potash, and the ammonia by the salt. The tubes are then to be disconnected and again weighed; the quantity of uncombined ammonia in the manure will then be shown by the increased weight of the upper tube containing the copper salt; and the quantity of water, by the increase of weight in the middle tube, containing the potash and lime. The next step is to determine the combined ammonia. To do this, mix the manure with an equal quantity of finely powdered quick-lime; shake them well together, and immediately connect the tubes as before; then expose the test tube to a low red heat, and the ammonia will be driven off. As it passes up through the copper salt, it gives it a fine blue color, and the operation may be known to be complete, when it ceases to extend any higher. The quantity is then determined by weighing as before.

The upper tube need not be so large as the middle one, nor the middle one so large as the lower. Thin vials with the bottoms off, might be made to do in the absence of tubes; but the weight of the glass would of course lessen the accuracy of the result. A delicate and correct balance is of the first importance.

POTATOES.

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. TUCKER, ESQ.—The potato is most productive and more perfect in a moist soil,—not wet nor dry. A soil that is good for oats, wheat or corn, and that has had a crop on it the preceding year, will cause them to grow more rapidly and to mature eaarlier than they will on a sod. A rapid uninterrupted growth and perfect maturity, are indispensible for the production of a first rate potato.

Having selected a suitable place, draw out 30 two-horse loads of stable or yard manure to the acre, making about 100 heaps. As soon in the spring as the ground is in good condition to plow, spread the manure evenly, and plow it immediately under. About the middle of May, plow it again, and harrow until it is fine and mellow. Furrow about two inches deep, and two feet nine inches wide. Potatoes that are of merchantable size are the best for seed. Cut such as require it so that you have three or four eyes to a piece. Put the pieces about ten inches apart in the rows, and throw on each piece about a tea-spoonful of plaster of paris. Cover with a hoe an inch thick. As soon as the young potatoes are three inches high, plow them, throwing the furrow from them. Dress them out nicely without bruising them, putting about half an inch thick of earth around the hill, and destroying everything else. As soon as any of the tops begin to lean, plow again, throwing the furrow to the hill, and dress out as before. Put a teaspoonful of plaster of paris on the tops of each hill, and the cultivation is done. When the tops are all dead, and the ground so dry that the potatoes will come out *clean*, throw them out with a spade or four tined fork, and pick them up within fifteen minutes after. If left long in the sun or light, they are injured. Have bins in your cellar that will not hold more than forty bushels a piece, with floors raised about four inches from the ground. Put your potatoes immediately in these bins, and shut the light out as much as possible, allowing a circulation of air through the cellar. Let all remain so until the weather becomes so cold as to make it necessary to close your cellar for the winter. Then close it, and cover your potatoes with a grass sod two inches thick, grass up. In the spring your potatoes will be as fine as when you dug them.

This has been my practice for the last two years, and I have had no rotten potatoes. R. K. TUTTLE.

Morristown, N. J., Jan. 12, 1846.

We see no objection to the management of potatoes as above directed, under ordinary circumstances; but where danger was to be apprehended from the *rot*, or potato disease, the mode might not in all respects be the best. For instance, though we believe the quality of potatoes for the table is generally injured by exposure to light and sun, yet it is an established fact that one of the best preventives of rot is to sun them before they are stored for the winter. The Commissioners appointed by the British government to investigate the causes of the potato disease, advise that potatoes designed for seed should be dried and sunned till they are green, in order to insure healthy and strong germination.—ED.

FOLDING LADDERS.

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A ladder, as every farmer knows, is one of the most necessary implements of the farm, and is required for numerous and constant uses in ascending stacks, tops of buildings, gathering fruit, pruning fruit trees, &c. At the same time it is usually a very awkward implement, partly so because clumsily made, and always so essentially from its length. The selection of light, well seasoned, and strong wood, as material for construction, and giving the styles or posts the greatest thickness only in the middle where most liable to break, would render them more convenient. In addition to these, if the ladder is made in the *folding* form, it becomes still more neat and portable. The accompanying figures show this mode of construction. A exhibits the ladder as open for use; B, the same half shut; and C, entirely shut. The rounds, which are made small, and of the strongest wood, turn on iron pins passing through the poles. This ladder has one great convenience in pruning apple-trees, as it may be thrust through thick branches, while shut, like a pole, without bruising the tree, and afterwards opened for [illegible]

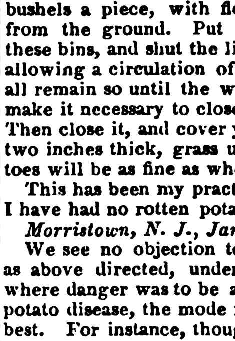

Fig. 30.

COLMAN'S EUROPEAN AGRICULTURE—PART V.

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Classification of Soils.—On this point Mr. Colman uses no "scientific distinctions," preferring such terms as even the commonest farmer can understand. He thinks that "for all practical purposes, soils may be ranked under five different heads—sandy, clayey, calcareous, peaty, and loamy. A sandy soil is that in which sand abounds; clayey, in which clay; calcareous, in which lime in some form prevails; peaty, in which peat; loamy, in which a rich loam abounds." * * * "In general, where there is found in a soil 80 per cent. of sand, it must be pronounced a sandy soil; but it is not always easy to class a soil which is of a mixed character, and say what kind of element predominates."

When speaking of the "PHYSICAL PROPERTIES OF THE SOIL," he alludes to a theory advanced by Liebig in his late treatise on artificial manures, that the system of draining has been carried in England to an injurious extent, by allowing the soluble parts of manure to be washed down beyond the roots of plants. Liebig's language is,—"The system of drainage which of late has been so extensively followed in England, brings the land into the state of a great filter, through which the soluble alkalies are *drawn off* in consequence of the percolation of rain, and it must therefore become more deficient in its *soluble* efficacious elements." He, Liebig, then goes on to state that he has "succeeded in combining the efficacious elements of manure in such a manner as that they will not be washed away; and thus their efficacy will be doubled. Owing to this, the injurious consequences of the present system of draining are removed; agriculture is placed upon ascertain principles as well arranged manufactories," &c.

In reference to the distrust which Liebig would thus throw on the practice of draining, Mr. Colman remarks, that the beneficial results of the system have been so marked and striking, that it may, in his opinion, still be pursued "with a good degree of confidence. He refers to an example he had lately seen where a field of turneps, on a thin, dry, and light soil, in which sand abounded, the beneficial effects of thorough drainage" were shown in the crop being better by one half on the drained, than on the undrained portion of the lot. In relation to the brilliant results which farmers may be led to expect from the use of the artificial compound spoken of, Mr. C. expresses some doubts, not however, he says, in any captious spirit, knowing how much agriculture must in the end, owe to science, and being ready to hail with the highest satisfaction any triumph it may achieve."

In reference to PEATY SOILS, which are formed principally of decayed vegetables, it is observed—"If vegetable matter were, as is often reckoned, the best food of plants, it would seem as though no soil could be so fertile as that of peat. This is not found to be the case, however, but for reasons not so well established as the fact." In ordinary cases he thinks it must be admitted that—"the fertility of a soil essentially corresponds to the amount of vegetable matter found in it, whether it supplies, in any degree, the actual substance of the plant, or, by its gradual decay, be merely the vehicle of transmitting for its nourishment the gases out of which its substance is to be composed. It is certain however, whatever may be the philosophical reason in the case, that pure unmanufactured peat does not form a nourishing soil or substance for plants, other than those to which a wet soil is particularly congenial, and that it cannot be made so but under a particular management which I shall presently describe. The vegetable matter of which it consists, being once thoroughly reduced, and mixed with other substances of an alkaline character, is rendered a most enriching manure for most kinds of land, though a much less substantial one than is generally supposed. One of its great uses is that of an absorbent, taking up the liquid matters which would otherwise be lost."

Mr. Colman informs us that the reclamation of bog lands has been carried on to a great extent in England and Ireland. In the latter island, he witnessed the operations of one company which has at this time, five thousand acres of bog in the process of improvement. He thinks the peat bog of the United States, as well as England, "may be rendered in the highest degree productive and profitable." In relation to the bog of salt marshes, it is remarked that they are of a "different character from fresh-water peat-bog." The vegetable matter being chiefly marine plants, "which have served as a kind of net-work to collect the earthy matter brought among them by the tide. The quantity of salt intermixed with these deposites, gives them a peculiar character. They are favorable to the production of plants congenial to them; but other plants cannot be made to grow upon them till they are thoroughly decomposed; and in that case no soils yield a more luxuriant or richer vegetation. In truth they require to be reduced to the state of fine mould, and the greater portion of the saltness exhausted, which time itself will effect where they are kept from the access of the tide, in order to be in a condition favorable to the growth of other than marine or saline plants."

Under the head of HUMUS, or VEGETABLE MOULD, Mr. Colman enters somewhat into a discussion of the point assumed by some writers, that humus, or vegetable matter, is not taken up as the food of plants. He quotes from Liebig in reference to the fertility of the soils in the neighborhood of Mount Vesuvius. "The land in the vicinity of Vesuvius," says Liebig, "may be considered as the type of a fertile soil, and its fertility is greater or less in different parts, according to the proportion of clay or sand which it contains." These soils, on account of their origin, it is thought "cannot possibly contain the smallest trace of vegetable matter; and yet it is well known" continues Liebig, "that when the volcanic ashes have been exposed for sometime, to the influence of the air and moisture, a soil is gradually formed in which all kinds of plants grow with the greatest luxuriance. This fertility is owing to the alkalies which are contained in the lava, and which by exposure to the weather are rendered capable of being absorbed by plants." But "thousands of years," it is added, "have been necessary to convert stones and rocks into the soil of arable land."

Mr. Colman thus comments on the above:—"General experience would seem to show that soils without any vegetable mould are not productive, and most practical farmers would prefer, of all others, a soil where the vegetable matter, well compounded, existed in abundance, forming, as it is termed, a deep and rich *loam*. But it would seem that in the case to which Liebig refers, thousands of years are necessary to render a mass of lava fertile, and in such a case it might be fairly presumed that some vegetable matter might accumulate and produce the desired mixture." Mr. Colman, however, observes, in further considering the subject, that the inference that Liebig believed the vegetable matter in the soil to be of "no moment," might not be quite just. "He does," says Mr. C., "consider the humus of the soil as funnishing, in its decay, a necessary supply of carbonic acid to the plant in the process of germination, though of no use after the plant gets above ground; and he supposes that the manure of animals fed upon the product of the land return to the land those mineral elements which they took from it, and which are indispensable to their perfect formation. This may be so, and in this view, he does not deny the value of vegetable mould, or humus. But certainly," concludes Mr. Colman, "there was nothing improbable in the supposition that plants might have found some portion of their food in those decayed substances which once constituted a part of the substance of their predecessors. Indeed, I see as yet no sufficient grounds to conclude that their office in supplying carbon to the growing plants ceases as soon as the plant is above ground, and able, as he supposes, to gain its whole supplies for itself from the atmosphere. It is quite certain that the growth of a forest would be checked, and the amount of humus in the soil be diminished, if all the decayed leaves and limbs which fall from the trees were constantly removed; and it is ascertain that the continual cultivation of land with supplies of manure, exhausts its vegetable mould; and that the application of vegetable manures to crops in a growing state is often as efficacious as when applied, or plowed in, with the seed."

Mr. Colman states that he does not undervalue scientific agriculture. "Science," he says, may do as much for agriculture as for any other department of business, or art, or health, or comfort, or enjoyment." But for the present he thinks "the practice of agriculture is very much in advance of the theory of agriculture."

Mr. Colman pays the "ENGLISH CHARACTER" a handsome tribute. He states, as a conclusion resulting from close observation, that "they are an upright people"—that in general, "their habits, like their plowing, are direct and straight forward, and are opposed to all baulks and all tortuous windings. I thank God," says he, "that the blood of such a people flows in my veins, for I look upon honesty as the true nobility of man, and the only aristocracy to which my heart burns to pay its spontaneous and unclaimed homage."

A large portion of this number is devoted to the subject of PLOWING. The perfection of plowing, he says, consists in its being done "exactly as you wish or require to have it done." He speaks in the highest terms of the excellence of English plowing, which he states, is done in all particulars, "exactly according to a prescribed form"—as perfect, he declares, "as a ruffle just come from under the crimping iron."

He describes particularly a plowing match at Saffron Walden. The furrow slices were required to be seven inches in width, and five inches in depth. It was not a match against time, but the work was to be executed within a certain time. Such was the exactness with which the work was performed, that he feels confident there was not in the whole field "the variation of an inch in the width or depth of the furrow, or a single crooked line, or even one solitary baulk. Two horses only were used to a plow, and each plowman was his own driver. "I went over the the field," says Mr. C., in an extacy of admiration at its uniformity, neatness, exactness and beauty." From Mr. Colman's account, the skill of the English plowmen would seem to be complete. Finishing the last furrow of a land in a proper manner, is known to be no easy matter. Mr. C. thus describes the manner in which this was performed by one of the competitors at the plowing match mentioned. "In the case to which I have referred, the last land remained at the close, a single unbroken strip, of equal width, from one end of the field to the other, lying like a stretched out ribbon, which, as the plowman came down the course, he turned without breaking, and with perfect precision, from one end to the other. In this instance, the horses seemed almost as well trained as the driver, and inspired with an equal emulation." It is observed that "two circumstances contribute strongly to this perfection of English plowing. The first is that boys are trained to it as early as they can possibly be employed with safety. The second is the division of labor, which generally prevails, so that individuals devote themselves, to a degree exclusively, to one particular object."

In relation to "GENERAL RULES FOR PLOWING," we are informed that "the depth of plowing varies in different soils and for different purposes. The average depth may be considered as five inches, but no direction on this subject will be found universally applicable. Three of the most eminent practical farmers with whom I am acquainted here, plow not more than three inches; but the surface mould, in these cases, is very thin, and the under stratum is a cold, clammy chalk." Mr. Colman observes, in reference to these, and some other examples where even shallower plowing had been practiced, that "they are well worth considering. I do not understand," he says, "that these practices at all militate against the advantages to be obtained from subsoiling. In cases where subsoiling and thorough draining are not applied, this shallow plowing may be preferred, as the mingling of the cold and inert subsoil with so thin a surface of vegetable mould, would doubtless be prejudicial, at least for a length of time."

But, says Mr. Colman, the general rule in England, "when the soil admits of it, and manure is abundant, is that of rather deep plowing—five or six inches is the average; in many cases much more than this. The loam, or vegetable mould, is without question, the great source or medium of nourishment to the plants. Be it more or less deep, it is always safe to go to the bottom of this, and by gradually loosening a portion of the subsoil, or lower stratum, and incorporating it with the mould, and rendering it accessible to the air and light, it acquires the nature of mould, and the whole arable surface is enriched."

As to the manner of turning the furrow-slice, we are informed that two modes are adopted—"the one to lay the furrow-slice entirely flat, shutting its edge exactly in by the edge of its neighbor; the other to lay it at an inclination of 45 degrees, lapping the one upon the other." Mr. Colman thinks the former mode, "where land is to be sown with grass-seed, and as the phrase is with us, laid down, is, undoubtedly, to be preferred," and he is inclined to the opinion that this mode is preferable in the United Srates for any grain crop; but he adds, (what is evidently important,) that the higher temperature which prevails in the United States may be expected sooner to decompose the vegetable matter thus pressed down, "and thus sooner furnish a pabulum for the growing plants, than in a climate where, in a much lower and more even temperature, the decomposition cannot be expected to take place so rapidly." He states, however, that the mode of turning the furrow-slice at an angle of 45 degrees, which evidently leaves the ground more loose, and exposes a larger portion of it to the air, is generally preferred in England. He describes this mode:—"To avoid having any of the grass protrude itself between the furrow-slices, they have here, what I have never seen in the United States, [we have seen it here, in the hands of one or two Englishmen,] a skim colter, that is a miniature plow-share, or blade, placed under the beam, and so adjusted as to cut an edge from the furrow-slice as it is turned over; this piece so cut off, at once dropping down, and being buried under the furrow-slice as it goes over. The consequence is that there is no grass on the edge of the furrow-slice to show itself, and great neatness is therefore given to the whole work." He describes another mode of plowing which he has sometimes seen practiced, "by which the furrow-slice is not merely lifted, but may be said to be rolled over, or twisted in a sort of bag fashion." This was thought to be "principally owing to the form of the mould-board, for no workman could have done it with a straight or convex form of mould-board. It would seem to render the soil more friable and loose; but every departure from a straight line, or wedge form of the mould-board, evidently must increase the drought."

Mr. Colman remarks that—"the great object of the English farmers, in plowing, seems to be the thorough pulverization of the soil." It seems reasonable that this should be the primary object every where. They plow and scarify and harrow their lands repeatedly. The propriety of the practice of breaking and tearing out the turf, bringing the grass and roots to the surface, that they may be raked up and burned or carried away, Mr. C. deems quite questionable. It may, he admits, be a good mode of getting rid of the couch, or twitch grass, (*Friticum repens,*) which in many instances is exceedingly troublesome; "but" he says "where it is a mere clover ley, or an old grass pasture or meadow, the taking out or removing the vegetable matter seems to be a serious waste."

The advantages of SUBSOIL PLOWING, Mr. Colman thinks are very considerable. Its advantages over very deep plowing with a plow of common construction, are that in the one case the cold and inert soil is brought to the surface, "in a condition unsuited to the purposes of vegetation, and that much time and expense are lost before it can be restored to fertility;" but in the other case, the substratum is gradually brought to intermingle with the top soil, and cultivation is not interrupted, but rather benefited by the intermixture. "Another and very great advantage derived from subsoiling," says Mr. C., "is in the admission of air and heat to the loosened soil, by which it is improved, and better sub

serves the purposes of vegetation, and at the same time, opportunity is given for the free expansion of the roots of the plant." Another advantage still, is the opportunity afforded on some lands for the rain-water to pass off freely.

Several cuts of plows of various kinds, as well as other implements used for working the soil, such as grubbers, scarifiers of different kinds, harrows, &c., are given, followed by a chapter of "GENERAL REMARKS ON THE USE OF AGRICULTURAL MACHINERY;" in which is some excellent observations, showing that machinery not only lightens labor and increases production, but has also a favorable and happy effect on the morals and health of society. But having already extended our review to a great length, we are compelled to pass over the remainder of the number without further comment. The perusal of it has increased our confidence in the ability of Mr. Colman to execute the task he has undertaken, not only according to the original plan devised by himself, but at the same time in a manner which will, in the end, leave no ground for complaint. He will form a work, which in point of interest to the general reader, will be unequalled in its kind, and yet one which will lack nothing of the essentials to value as a compendium of practical facts.

We are informed that Part VI is now in press. Published by A. D. PHELPS, Boston.

SHEEP AND WOOL.

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WE have lately received so many communications on this subject, that we are under the necessity of condensing several of them into one chapter.

From Mr. JOHN BROWN, of Akron, Ohio, we have a letter from which we give the following extracts:

"I think that really good, fine sheep may be found in flocks called Merino, and those called Saxon, (and I have experience of both,) and I ask, if either of these breeds possess any valuable trait, if that particular trait may not be preserved in their posterity, while the bad traits may be in a great measure bred out? I absolutely know, from my own experience, that this may be done; and for this very reason, I consider the few good Saxon sheep in the country as invaluable, on account of the quality of their wool. I have no desire to get up a new excitement about the Saxon name, but I should be glad to see the wool-growing community give so much attention to the subject, as to be able to discern a good animal from a very mean one. I know of thousands of wool-growers all over the country, who are keeping flocks whose wool will not average yearly thirty-five cents per pound, while at the same time they might easily get as much and more wool than they now do, that would be worth yearly in ready cash, seventy cents per pound. [Is not this rather a "large" calculation?—ED.] This is abundantly capable of proof from actual sales made for the last ten years; but it can only be done by candid and careful comparison, sufficient to make persons tolerable judges of sheep and wool.

"I will mention some Saxon and some Merino flocks, as they are called, in which may be found a goodly number of animals such as no sensible and honest man can object to. I mention only a few from which might be selected good animals to breed from.

"The flock of Mr. Samuel Whitman, of West Hartford, Ct., are of good constitution, good form, very fine, and have thick heavy fleeces. The choicest animals I have ever seen, were either bred by Mr. Whitman, or are the descendants of sheep bred by him. The flock of Mr. John Marvin, of Woodbury, Litchfield county, Ct., cannot be exceeded for constitution, and they have very heavy fleeces, though the fleeces are not quite so uniform, nor quite so fine, as those of Mr. Whitman's flock. The flock of Mr. Charles B. Smith, of Wolcottville, Ct., strongly resembles that of Whitman, in all points, and were, to some extent, derived from it. Mr. Smith is a judicious breeder, and his sheep are excellent. The flock of Mr. Thomas Swift, of South Amenia, Dutchess county, N. Y., combine to a great extent, all that can be desirable in fine sheep; viz: fair size, good constitution, good weight of fleece, and an excellent quality of wool. I have seen some choice animals from Vernon, Oneida county, N. Y., but have not been able to examine whole flocks, which is the true way of judging for breeders. So much for Saxon flocks.

"I will now mention some that are called Merino, (no matter what they are,) which have a good number of animals in each of the kinds I have described—that is, heavy, fine fleeces of *real wool*. The flocks of Messrs. Samuel Patterson, Samuel Cole, Wm. Brownlee, Matthew McKeever, —— McDowall, Wm. More, John Rankin, and others, in Washington county, Pa. Messrs. John Smart, John Hall, and others, in Beaver county, Pa., Messrs. Jesse Edgington, Talbot Hammond, of Brook county, Va., Messrs. George Purcell, Joseph Morgan, Richard Ridgley, —— Gilmer, and others, in Ohio county, Va., Adam Hildebrand, and Thomas Noble, of Stark county, Ohio.

"The noise about a great deal of animal oil to preserve the health of sheep and the wool from *dead ends*, is a superfine humbug. Every healthy animal, in good condition, has enough of it to meet all the wants of the manufacturer and the consumer. For a sheep to be very black or yolky, does not prove it to be a good animal, hardy, heavily wooled, fine, or fit to breed from. Some very choice animals are heavily coated with yolk, while others of equal worth are not so; as many often are seen in the same flock, and all of one blood."

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From Mr. J. S. PETTIBONE, of Manchester, Vt., we have a letter, accompanying some samples of wool. Several of the samples are from very old ewes, which, on account of their blood and qualities, are kept to rear lambs. He states that he has a "hospital flock" of a dozen, all of which are over ten years old—one is *fifteen* this spring, and another will be *nineteen* in July next. The latter he says was from an ewe purchased in 1822, of the Humphrey importation. All of them, he says, are in good order, and bid fair to rear lambs this season. The two oldest reared lambs last season, samples of the wool of which are sent. The wool is good. The last year's lamb, (a buck,) from the fifteen year old ewe, weighed 158 lbs. on the 3d of March last. The three oldest ewes, he states, "when in their prime, averaged over five lbs. of wool each, and reared a lamb." He thinks they will this season average over three pounds each, of clean wool. Mr. P. thinks these ewes by no means "too old to be profitable. It is," he says, "much less expensive to rear a buck from a good blooded old ewe, than to send 300 miles and pay from $25 to $200 for a buck that may prove to be of little value." The ages of Mr. P.'s ewes are certainly remarkable, and show not only the tendency of the Spanish sheep to longevity, but the good care that has attended them. Mr. S. makes some good remarks in regard to selecting sheep for breeders. He thinks particular attention should be given to the evenness of the fleece as to quality. He says the shoulder is not unfrequently fine, when other parts of the fleece are coarse—that the coarse flank, with an occasional coarse hair, shows impurity of blood." He says "it is the long staple, thickly set, that makes a great fleece," and that this kind of fleece may be produced "fine, soft, silky, and free from gum."

To destroy ticks, while the fleece is on, Mr. P. directs to scatter Scotch snuff among the wool, and after they are sheared, to dip them in a decoction of tobacco, which, he says, will kill the ticks and prevent the scab. The "grub in the head," he thinks does but little injury to sheep that are well fed. He says he has tried various prescriptions to prevent the egg being deposited. He has tarred the noses of the sheep, and blown snuff up the nostrils, but all failed. But at last, he has found a "sure remedy." "It is the same the Dutchman used to make his horse slick. He rubbed the horse's back with the oats he had breathed on over night." The secret, of course, lies in giving plenty of food. [For our own ideas on the sheep-bot, or "grub in the head," see last vol., page 285.]

A correspondent at Cornwall, Vt., with the signature of "A Subscriber," sends an article on the Sheep of Vermont, together with handsome samples of wool, which he states are "from prize ewes exhibited at Vergennes, and at New-York city, in October last," now in his possession.

In regard to the introduction of the Spanish sheep into this country, and the advantages which have accrued therefrom, the writer well remarks, that—"farmers are more indebted to such men as Jarvis, Humphrey, and Livingston, than to some men of greater pretensions, who, in watching the shifting currents of popular opinion, lose sight of the agricultural interest." He thinks the natural advantages of Vermont are great for producing wool, and that some of the flocks will compare well with those of other states, "yet as a whole there is need of vast improvement." He states that the last census of Vermont showed that she possessed "about 1,700,000 sheep," and that the average weight of the fleeces "is two pounds and three ounces." [We suppose this to include *lambs*, as they were generally included in the census. This lessens the average considerably.] He sets the price of their wool at thirty cents per pound, for the last five years, which gives for each sheep, "sixty-five cents" per year. For the "surplus" sheep, he says, the farmers have usually obtained from 83 to 150 cents per head. Thus in many cases the profits of sheep-husbandry are small. But, "by a judicious application of means," he thinks "the net profits of the sheep of Vermont can be doubled." The means are, breeding from sheep of the best qualities. "For this purpose," he says, "the best flocks in the country should be examined; agricultural papers, and treatises on sheep should be consulted." In this connexion he recommends Morrell's "American Shepherd." Suitable shelter and food are also mentioned as among the requisites to improvement. A cross with a *good* Merino buck, he thinks, "will add from eight to twelve ounces to the weights of each fleece, in ordinary flocks." He mentions the flock of A. L. Bingham, of Cornwall, as one of excellence.

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S. N. Hawes sends us an account of the flock of Tyler Stickney, Shoreham, Vt., which he thinks a very good one, Mr. Stickney. it is stated, bred the Merino bucks *Fortune* and *Vermont Hero*, which have heretofore been noticed in the Cultivator.

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We have received from Mr. John H. Nettleton, of Watertown, Ct., several samples of Merino wool from his flock. Mr. N. exhibited some excellent bucks at the N. Y. State Show at Utica, and from all we can learn, his flock is a good one.

We have also received several samples from Mr. J. S. Pettibone, Manchester, Vt. They show well as to fineness, and are particularly clean and white. Among others we notice some very fine and handsome samples taken from an ewe, *nineteen* years old. She reared a lamb last season and is expected to do the same the present year. A few days since we saw fourteen head of Mr. Pettibone's sheep, which had been purchased by Dr. Miller, of Cortland. We examined several of them which we thought very good animals—the wool long, soft, and white.

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SORE LIPS IN SHEEP.

In reply to L. N., Chatauque Co., (see current vol. p. 49,) Mr. Reed Burritt states that he has had that disease among his sheep this winter, and cured it by applying a little tar, with a small wooden paddle, and afterwards giving the sheep in their feed-troughs a mixture of two parts salt with one of rosin. The sheep got well in a short time, and have had no symptoms of the disease since.

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PREMIUMS ON SHEEP.

Mr. Reed Burritt suggests that it would be proper for the New-York State Ag. Society to require that all sheep entered for premiums, should be in the same situation as to their fleece, that is that *all* should be shorn the season they are exhibited, or that *none* of them should be. He thinks that no fair comparison can be made between a sheep with a fleece of fifteen or sixteen months growth, and one that had been shorn within three months of the time of exhibition. The length of wool in one case, he thinks, disguises the shape and size of the animal, by which deception the judges or committees are often led to make a different decision from what they would do were all the subjects of competition under the same circumstances.

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FOOT-ROT IN SHEEP.

We have received an able article on this subject from Mr. J. T. Nathorst, Mt. Heathy, Hamilton county, Ohio. The chief object of the communication is to show that the idea of our correspondent "Grazier," in reference to the non-contagionsness of foot-rot, is erroneous. As we have already published several articles in reply to this position of "Grazier's," and also given our own views of the subject, it seems to us that nothing further is needed to correct that error. We however make a short extract from Mr. N.'s letter, which will be read with interest:

"In the year 1829, my father bought four hundred sheep in Saxony for the government in Sweden, my native country. He had previously on hand over one hundred Spanish Merinos, also a Royal flock. When the Saxons arrived at their destination, (my father's farm,) they were sadly affected with foot rot; perhaps brought on by being driven a great distance over alternately hard and muddy roads, if not caught from diseased sheep while travelling. The Saxons were kept strictly apart from the Spanish Merinos; nevertheless, in a short time, the disease in its worst shape broke out among the latter. We accounted for it by the fact that they had been driven through the same lane to the pasture."

Mr. N. states that the foot-rot had never been known in Sweden till its introduction as above described.

INFLUENCE OF STOCKS ON GRAFTS.

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L. Tucker, Esq.—I notice at page 368 of your December number, an article upon the influence of the stock upon the graft. The remarks as to a dwarf or slow-growing stock retarding the development of the scion, and a vigorous growing stock advancing its development, are facts so long proven that they admit of no argument. But the writer, as well as many of his predecessors, is entirely in error when he ventures the assertion that "*Grafts do not affect the stock, that is, the scion does not impart any of its distinctive qualities to the part of the tree below the point of insertion,*" and that "*it appears clear, therefore, that during the life of the individual, the point of junction formed by the meeting of the stock and the scion, constitutes a line of demarcation, a cross which the influence of either cannot pass.*"

In proof that there exists a *certain degree* of influence, I will now state that if a bud or graft of the Prunus Chamœcerasa, or Siberian Weeping Cherry, is inserted in a stock of the Mazzard, it will cause its roots to become fibrous, whereas naturally they are very deficient in fibres, and if a bud or scion of a peach tree that is diseased by the yellows, is inserted in a healthy peach stock, it will impart the disease to the stock, and any shoots which afterwards spring from the stock below "*the line of demarcation*" will be diseased. As to an apricot scion producing plums, that is out of the question, and the Philadelphia gentleman who supposes so has forgotten as to the stone he planted, or he may have planted an apricot stone that failed to vegetate, while a plum stone planted or accidentally dropped there, may have sprung up. At all events no such transmutation could take place any more readily than could the silly supposition of wheat changing to cheat, or that a cow could produce a colt as its progeny.

Wm. R. Prince.

Prince's Nurseries, Flushing, Feb 10, 1846.

DOWNING'S FRUITS AND FRUIT-TREES OF AMERICA

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Mr. Downing, by his admirable and excellent works on Horticulture, has become a public benefactor, and his reputation, as a native author, is a matter of lively pride to thousands of his countrymen. I shall therefore feel no delicacy in making a few remarks on his works, in the pages of the Cultivator.

His volumes on Landscape Gardening and Rural Architecture, have created a new era in rural taste in this country. Over the whole country, it is plainly seen that, from the publication of these books, the dawn of real taste in cottages and grounds commenced. The elegant, the graceful and the expressive,—before so dim and obscure,—Mr. Downing has rendered clear and significant to the eyes of his countrymen.

But I wish to speak now more especially of his last work, the "Fruits and Fruit Trees of America."

This is his most useful and most laborious work; and after a pretty intimate acquaintance with all the best English and Continental works on Pomology, I must express my humble opinion that it is by far the most perfect treatise on the subject ever issued. I am assured by the publishers that *five large editions* have been sold since its first issue—a success which has no parallel in any work in gardening literature. It has penetrated to every part of this country. Its adaptation to our soil and climate, its systematic arrangement, the minute practical observation evinced in every page, and above all, its clear and perspicuous style, have contributed to its great popularity. They will contribute every day more and more to its greater usefulness.

I have noticed, however, in some quarters, a strong disposition to attack this invaluable work on Pomology —to distort its meaning, and deny its merits. Because a work which every one admits, from the very nature of its subject, must embrace errors, really does contain some, this small party of fusilleers have opened their warfare against it. They have affected to deny its facts, condemn its heresies, and decry its want of originality.

Unfortunately they have nearly all belonged to a class so evidently interested in disproving certain home-truths in this work—certain habits of miscalling sorts—dealing in spurious kinds—and cultivating in a miserable manner, (by which only we poor consumers suffer,) that their motives have been understood by the public at large.

> "Envy will merit, like its shade pursue,
> But like the shadow proves the substance true."

The Fruits and Fruit Trees of America have attracted eminent attention abroad. A late number of the London Gardener's Chronicle contains flattering commendations of the work from the pens of Lindley and Thompson.

The master "*heresy*" with which Downing is charged by some of his critics, is that of attacking the theory of Knight and others, respecting the *duration of varieties* of fruit. He swept away with a clean stroke, the whole fabric raised by the late ingenious President of the London Horticultural Society, which was based on the idea that a given sort only lasts as long as its original or parent tree.

It must be very gratifying to Downing, and discomfiting to his critics, to see a late leading article in the first Horticultural paper in England, and written by the most distinguished of scientific horticulturists, Professor Lindley, who takes precisely the same ground on this "heresy," as that first taken by Downing, in the appendix to his work on Fruits.

I hope you will allow me space for the following brief and pithy extract from the Professor's article:

"We regard the notion that the races of plants wear out, as utterly baseless and visionary. It is very singular that not one of all those writers, who have been fatiguing the public eye, should have perceived that the very few facts on which they rely are susceptible of a much more simple interpretation than that given by Mr. Knight, and caught up by themselves. It is marvellous that they should have imagined that the common sense, to say nothing of science, of the intelligent cultivators of the present day should accept for truth such an extraordinary exhibition of false reasoning. One would think all death or disease was exclusively the consequence of old age."

Here is Mr. Downing's greatest heresy proved to be ultra-orthordox! And now that I have proved myself one of his ardent admirers and disciples, I am

Respectfully yours, J. J. King.

New-York, March 17, 1846.

CULTURE OF CARROTS.

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Mr. Tucker—This subject is too generally deemed of minor importance to the farmer, and of more trouble than profit; but from eight years experience, the writer of this article is convinced that it is worthy the attention of *all* cultivators of the soil, as a source of profit, and as a means of increasing the health of man and beast.

From 1000 to 2000 bushels of carrots may be raised per acre, on good land—1000 bushels per acre might be as common a yield as 40 bushels of corn. My method of sowing and cultivating this crop is described in the March number of the Cultivator for 1839. [On reference, we find Mr. Meacham's mode is in substance as follows:—First, the ground is plowed very deep—manured the year previous with "long manure" and "hog manure," quantity not stated—the furrows are harrowed level. Seed is sown by hand. Furrows for the seed are made by the hoe, the edge being reversed, twenty inches apart—the seed dropped from dishes held in one hand, taking out the seed with the other, and being careful to hold the hand close to the ground to prevent the wind from blowing it away. Covered with the hoe—giving only a slight covering, which Mr. M. thinks is best, as he believes a shower of rain will bring up the seed without any covering, if the soil is loose and light—thinks the seed is often lost by deep covering; brushes the ground over with the hoe as soon as the carrots begin to come up; when they get well up, plows among the rows with a horse, "again and again." When harvested, runs a strong team and plows as near the outside rows as possible, and deep turning the furrows from the rows; the hands follow after, and pull the carrots out with the hands.—Ed.]

All kinds of soil, except wet, will produce good carrots. They may be sowed from the middle of April till the middle of June—probably first of May is the best time. For a number of years past, I have raised from 1000 to 1500 bushels per year. On rich soil, they will frequently grow to the size of five inches in diameter at the crown, and from one to two feet in length. They are profitable for every kind of live stock—more especially for milch cows in the fall, winter, and spring. I have known work horses kept throughout winter on carrots and hay, and they enjoyed good health and performed well.

I can give some facts which are definite and to the point, in regard to the importance and profit of carrot-raising.

Mr. David Bennett, a neighbor of mine, a judicious farmer of some 60 or 70 years of age, having never learned the value of carrots, thought them, as do many others, beneath the notice of the farmer? Last spring, he consented to cultivate six square rods, on condition that I would sow them, which I did. The season was dry, yet he harvested over 50 bushels of carrots from the ground, which is over 1,300 bushels per acre. He fed them at the rate of half a bushel per day, divided between a farrow cow of ordinary size, and a farrow heifer, three years old past. He commenced feeding them the first day of December last, and the result is, he has made since that time, from the cow and heifer, 130 pounds of good butter, besides having plenty of good milk for two persons through the winter—an increase of more than half the quantity of slops for the pigs, a saving of more than half the usual quantity of hay fed to his cows, and his cows are in better health and better flesh. His butter is of better color and flavor, and of course in better demand in the market. He now agrees with me in regard to the importance of this subject to the farming community.

If there are 300,000 farmers in this state who will consent to try this experiment the present season, and make a fair report on or before the first of March next, I have no doubt the result would be equally favorable.

Again, Mr. Sherwood, of Richland, an enterprising young farmer, at my solicitation, promised to sow one-fourth of an acre. He reported to me yesterday. He obtained a yield of over 1,700 bushels per acre. [It may not be amiss to inquire how the yield was computed—whether by measure or by weight? If by measure, great care would be necessary or the yield would be overrated. Weight is unquestionably the fairest criterion. The Massachusetts rule, we think, is sixty lbs. for a bushel.—Ed.]

I might go on and multiply instances—indeed I have never known an instance where the experiment has been faithfully tried, that has not resulted in abundant satisfaction. I respectfully request every cultivator of the soil in this state, to sow and cultivate in the best manner, the present season, on a good rich soil, at least a few rods of carrots. Let this be done, and we shall not hear so frequently of a scarcity and high price of hay and butter. Thomas S. Meacham.

Richland, N. Y., April 4, 1846.

WINTER FOOD FOR STOCK

To enable herbivorous animals to assimilate their food, it is necessary that the nutriment should be disseminated through sufficient bulk to give distention to the bowels during the process of digestion. In addition to bulk, ruminating animals require also food of a fibrous nature to enable them to chew the cud—a function which experience proves is essential to health.

Green herbage is undoubtedly the food best adapted to the natural wants of these animals. It has been remarked by a sensible writer on this subject, Mr. W. C. Spooner, that good grass is the only kind of food in which nutriment, bulk, and succulence are combined in the proportions exactly suited to their habits. But in many situations where the wants of man render the keeping of stock indispensible, it is impossible to supply them at all times with what may be considered their most natural food; and for this, we must therefore adopt the most proper substitute.

Dried herbage of the kind which in its green state is most congenial to animals, is unquestionably the most suitable for the principal, or bulky part of their food during the time in which artificial support is required. Hence, hay properly made, from the most nutritive grasses, and from clover, is first to be chosen. But even with the best of hay, something more is required to form for the animal a perfectly natural food. Succulence is wanting, and in most dry fodder there is a deficiency of nutriment.

It is, of course, an object for the farmer to grow such crops as will furnish food for his stock at the least expense; but as circumstances in regard to soil, climate, &c., vary much, no rule of universal application can be laid down. The cereal grains, on account of the large proportion of nutriment which they contain, will always be profitably cultivated and used to a greater or less extent. And so far as the production of food for stock is required, Indian corn will take the first rank among grain-crops, in all situations adapted to its culture.

The deficiency of nutriment in any kind of dry fodder, may be supplied by adding to the animal's allowance, a due proportion of some kind of grain; but to furnish the animal with food most congenial to its natural habits, the addition of something more succulent would doubtless in many cases be of advantage. Hay or straw, with moderate quantities of grain, in some form, together with juicy vegetables, furnish the best substitute for grass.

In this country, potatoes, turneps, carrots, beets, &c. are sometimas cultivated, either for fattening animals, or as auxiliaries to dry food in wintering stock. The question is often asked, which of these articles can be most profitably grown by the farmer? and as before suggested, the answer must depend on several circumstances. The writer has had some experience in cultivating and using all these vegetables, and a few of the conclusions induced by this experience will be briefly stated.

1. On cold and rough soils, or those of only medium and inferior quality, the potatoe is to be preferred.

2. On warm, rich soils, the carrot is most profitable.

3. Between beets and turneps, the latter should be chosen for the more thin soils and a cool climate, and the former for a deeper soil and a more warm and arid climate.

According to the estimates made by Thaer, Veit, and others, (and which it may be observed are supported generally by the writer's experience,) of the comparative value of these vegetables, *two* bushels of potatoes are equivalent in feeding animals to *three* bushels of beets, or to *three* of ruta-baga, *four* of white turneps, or *two and three-fourths* of carrots—allowing the same weight per bushel for each. Some estimate the carrot equal to the potatoe, weight for weight.

On rough and thin soils, potatoes can be cultivated with much less labor than either of the other vegetables named, and there are but few situations where a yield of at least two hundred bushels per acre may not be obtained. This would be equal to three hundred bushels of beets or ruta-baga, or four hundred of white turneps; and yet we are confident we have raised from two to three hundred bushels of potatoes per acre, in situations where neither beets, turneps, nor carrots would have given a greater yield, though the cost of cultivation would have been considerably more.

But on soils exactly adapted to carrots, a yield can be obtained so much greater than is afforded by potatoes, as to throw the balance decidedly in favor of the former.

Carrots may be sown from the 10th of April to the 1st of June, though on light and dry soils, we should prefer sowing them as early as the ground is found to have acquired a sufficient degree of heat to cause the seed to vegetate. Beets may be sown from the first to the 20th of May—ruta-baga from the 20[illegible] May to 10th June—and flat or common white turneps, from the 20th July to 10th August. The chief advantage of raising the latter for stock, consists in the lateness of the season at which it admits of being sown—frequently occupying land from which a crop of hay or rye may have been taken the same season. They are very usefu[illegible] cattle and sheep the fore part of winter, though their real value is thought to be fifty per cent. less than potatoes.

Carrots, beets, and turneps are sown to best advantage with a machine. A good machine will do the work better than it can be done by hand, and with a great saving of labor. After the ground is well prepared, a man will sow or plant from an acre to two acres in a day—according to the distance between the rows. Carrots will bear thick planting. Mr. Risley, of Chatauque county, a successful competitor for the premiums on this crop offered by the N. Y. State Ag. Society, makes his rows about ten inches apart. If, however, it is desired to use the horse-hoe or cultivator in managing the crop, a greater distance must be given,—say twenty to twenty-two inches. Where the use of implements drawn by a horse are resorted to, it is obvious that more space must be allowed between the rows than the carrots require; but this objection may be in a good degree counteracted by sowing two rows as near together as will just allow the working of a hoe between them, leaving the alternate spaces sufficiently wide to admit the harrow or cultivator. The plants should stand in the row at about the distance of three inches. The white Belgian carrot is most easily grown, but is thought to be less nutritive than the yellow varieties.

Beets and ruta-baga should be sown in rows, at the distance of two feet, and thinned to a foot apart in the row. After having been gone over with the hoe once or twice and carefully thinned, the cultivator will do the working, if properly used. In fact it is only necessary at any time to use the hoe in working close to the row. It is not best to thin either beets or carrots till they get well into leaf, as they are liable to the attack of insects, particularly the turnep flea or "fly," and the various kinds of "cut worms." The best protection against the fly which we have ever tried, is a sprinkling of plaster, air-slacked lime or ashes, while the plants are wet with dew, so that the dust will adhere to them and form a crust.

CAPABILITIES OF GEORGIA.

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Mr. Tucker—The great improvements that have been made in our world, and are still making in Agriculture and all the mechanic arts, are calculated to cheer the heart of every friend to our race, and we wonder how any being can live at this time and not feel a deep interest in these great matters, and a desire to contribute something, if it is ever so little, to so good a cause. In Georgia we have made a very prodigal use of the many good things with which Providence has blessed us. This is wrong, morally wrong. We ought to turn everything to the best advantage, and if possible leave the country in a better condition than we found it. Another race of men will come after us, and they will want land and timber too, as well as we, and as just men, we ought to leave something for them. But we are by our improper conduct, doing posterity a great injury without benefitting ourselves, for our wasteful ways are no advantage to us, but the contrary. But notwithstanding all our wasteful ways, and prodigal doings, we can yet do well enough in Georgia, if we can wean ourselves from our bad habits.

A great portion of our land can be reclaimed by proper management, and a good many things can be profitably cultivated that hitherto have received little or no attention. We can make wheat and flour in Georgia good enough for any body, and the people are in a fair way to convince themselves that they can produce the article in great abundance, for from everything we can learn on the subject, there was as much wheat sowed last fall as has ever been sowed in any two years before, and there is little doubt but what sugar can be profitably cultivated in half the state, and the other half is blessed with water-power in abundance, and other great advantages.

Wool and silk can be produced in Georgia as cheap perhaps as they can anywhere. Rye does not do well here, but barley does extremely well, and if the crop is profitable anywhere it can be made so here. On suitable land barley grows so thick and fine that it looks as though there was no room for any more on the ground. The sweet potato too does extremely well here, and it is certainly one of the most valuable roots in the whole world, and yet it is not cultivated to that extent that we think it should be. Almost every planter in Georgia cultivates sweet potatoes, but there are but few that cultivate the article for stock, and this is what we think every planter in Georgia ought to do. Every body knows that sweet potatoes are good for hogs, cows, and sheep, and that the article can be produced in great quantities, and yet it is not done. It is thought that cows fed on sweet potatoes give better milk, and more of it, than those fed on any other food we have in this country, and some think that hogs will fatten as fast on potatoes as they will on corn, but whether this is correct or not, there is little doubt but hogs thrive better or faster on corn and potatoes, or on peas and potatoes, than they do on either corn or peas, or both corn or peas. In every pea field that is intended for hogs, there ought to be a potato-patch that the hogs may get both peas and potatoes at the same time, and if the people would adopt the plan of feeding hogs partly on peas or corn, and partly on potatoes, they would doubtless find the plan a good one. If potatoes are left in the ground they will keep good enough for hogs, in that condition, a long time, sometimes almost or quite through the winter, and by leaving them in the patch and turning the hogs in, we get clear of digging, which is a considerable job. Perhaps the best plan is to turn both hogs and sheep into the potato-patch at the same time, that when the hogs root up more potatoes than they eat, the sheep can take care of them.

We possess many important advantages in Georgia, and if the spirit of improvement that is abroad in the world extends here, and the people abandon their old wasteful habits, Georgia can yet become one of the most desirable countries in the world. We have a sufficient variety of climate and soil to produce almost everything that is produced in the world; we, in fact, have so many advantages that we don't appreciate or improve any of them as we should do, but sometime we hope the people will wake up on the subject of improvement, and divide the honors and profits that are to be derived from these things. A. E. Ernest.

Bibb Co., Ga., 1846.

TURNING STOCK TO GRASS.

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Unless compelled by scarcity of winter food, we should not generally turn stock to pasture till the grass had started so as to afford what farmers call "a good bite." If animals only get a little grass, and that of a watery and innutritious nature, as the first growth generally is, it takes away the appetite for other food without giving much nourishment in its place. Besides, grass-lands, while in a soft or unsettled state, are injured by being trodden or poached by stock. This is perhaps the greatest objection to turning out early, or before the soil gets firm; though sheep, from their comparative lightness, do much less injury than heavy stock.

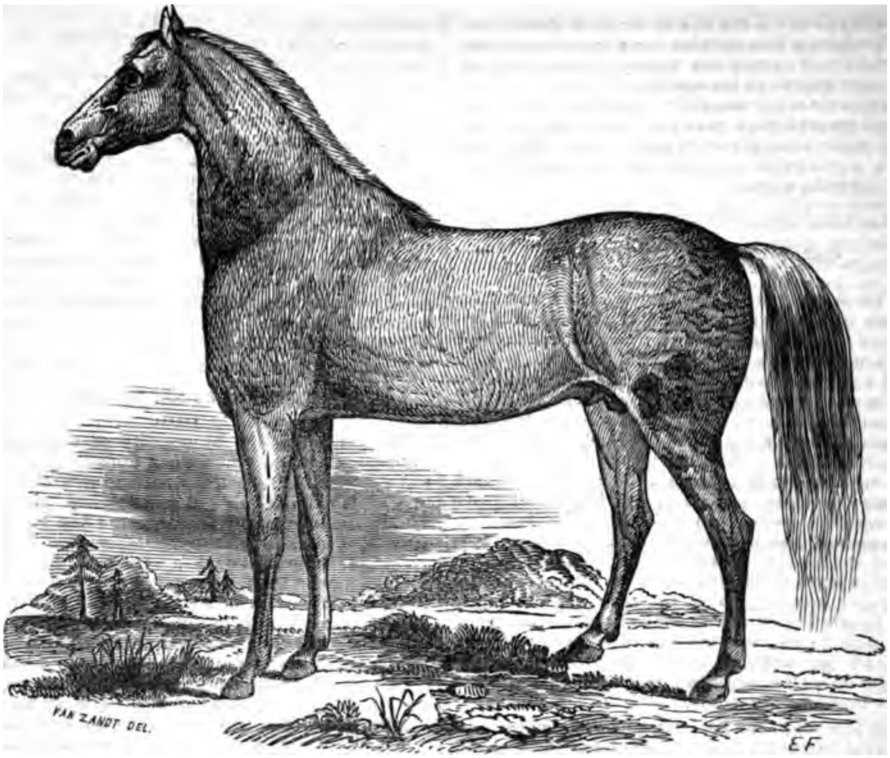
Clover and timothy are generally much injured by early feeding. Red-top and blue-grass are more hardy, and from their habits tend to unite the soil and make a firm sod. On this account, soils set in these grasses may be pastured, if dry, at almost any season, without much injury.

To check the too laxative tendency which young grass sometimes has, it is best to give stock a foddering of hay at night, for a while after they are turned out; and in case of storms, they should have the benefit of shelter.

Sheep may be pastured on rye for a short time, if it is pretty forward, without injury to the crop, and with very great advantage to the sheep, especially to nursing ewes. In case of a scarcity of other feed they may be turned on dry meadows. If not too heavily stocked, we do not think the yield of hay is much lessened by meadows being fed by sheep till the 15th or 20th of May. The crop is made later, but it is usually finer and thicker. Mr. M. Y. Tilden, of New-Lebanon, N. Y., an extensive wool grower, is in the practice of pasturing his meadows with sheep both spring and fall; yet he finds his crops of hay rather increase than diminish. He certainly gets a good product. In 1843, he took from 132 acres, 285 tons of well-cured hay, and not more than ten acres, as he states, was manured at all, excepting from the sheep as they grazed over it. We have known several similar instances.

It is best not to turn working oxen to grass till they have done their "spring work." They will perform labor much better when fed on good, bright soft hay, with two or three quarts of meal from Indian corn, barley, or oats and peas, with a few potatoes, carrots, and other succulent vegetables than when fed on the young grass. It takes some time for the animal system to accommodate itself to the change from dry to green food, or from hay to grass, and the first growth of grass, besides being deficient in nutriment, is likely to weaken animals by its cathartic action.

Deep Cultivation.—A correspondent of the London Gardener's Chronicle, speaking of the importance of deep cultivation, and in connexion a deep diffusion of manure, says, "I have found the roots of the Swedish turnep five feet below the surface on which its bulb was growing, and all around it to a distance of three or four feet, the fibres of the root to a lesser depth, had completely permeated the soil."



MR. MORSE'S HORSE "NORMAN."—(Fig. 43.)

THE original, from which the above cut was taken, is the horse called "NORMAN," or MORSE'S GREY, owned by Mr. CALVIN MORSE, of Lansingburgh. We had the pleasure, not long since, of seeing this horse in harness, and of witnessing something of his powers as a traveller; and we feel bound to say that our opinion of him is in all respects highly favorable. He is unquestionably a very valuable animal. As a roadster, his gait is good, and any one who will drive him, will soon be satisfied that he has all the speed desirable for any useful purpose. Though he is considered an "all day" horse, and will without urging trot ten miles an hour, he can readily accomplish a mile in less than three minutes. His constitution appears strong, and his faculty of endurance is undoubted. He is twelve years old, is 15¾ hands high, well proportioned, and weighs eleven hundred pounds. His color is a dapple grey.

But as furnishing a better account of this horse and his progeny than we are personally able to prepare, we make the following extracts from a statement put into our hands, the correctness of which is certified by George Vail, Esq., Gen. A. T. Dunham, J. Van Schoonhoven, Jr., L. R. Sargent, A. Patten, and others of Troy, Watervleit, and Lansinburgh:

"Of his pedigree little is known; but as he has established a reputation of his own, little anxiety is felt in this respect. His sire was a nameless horse brought to Quebec from France, and finally owned by Mr. James McNitt, of Washington county, in this state, in whose hands he died. The value of the stock was therefore unknown till it was thoroughly tested.

'Norman's celebrity consists not in length of pedigree, but in the excellence of his stock. In fact, so far as a good horse for the road is concerned, Mr. Morse has reached a desideratum, for the progeny of his horse possess all the good qualities of any stock, without a single vice. They combine great trotting powers, good courage and excellent bottom. They have sufficient size, good carriage, and good proportions, united with great tractability and gentleness. He has stood in Washington, and the adjoining counties, for the last nine years, but such has been the demand for horses of his get, that it is now almost impossible to purchase any of them of a proper age for business, at any price. They have commanded prices of from $150 to $600. A gentleman in Lansingburgh has realized over $1,200 for three of them. Foals by this horse, from mares of good reputation, have been known to bring $100 each, when dropped."

We would call attention to Mr. Morse's advertisement in this number. It will be seen that he offers good accommodations for mares sent from a distance.

BREEDS OF HORSES.

In the *British American Cultivator*, we find a report of the discussion by the "Newmarket Agricultural Club," of the question—"What breed of horses is best adapted to the wants of the country?" We give the following abstract of the remarks made.

The first speaker on the subject thought "some of the entire horses which had been into this country [Canada] within the past few years" have been too heavy and others much too light for the general wants of the country. A horse possessing rather light bone with good action is preferable for ordinary purposes. It is the common opinion that the horses of this section of the country are not as good now as they were 15 or 20 years since.

The second speaker said it was not many years since the Home District was noted from one end of Canada to the other, for its valuable race of horses; and he thought that by the introduction of the small race of English blood-horses, the stock was considerably run down and reduced in value. It was an acknowledged fact that the present half-bred horses in the District cannot endure half of the service the old-fashioned race is capable of enduring. He thought a cross of the largest sized French or Lower Canada horse with the best mares would produce a breed adapted to all useful purposes. The Lower Canada horses are great travellers, and canbe kept in good condition with less cost than any other race known in the country.

The third speaker thought the bone of the blood-horse was stronger than that of any other race; but he concurred with other members of the club, that only the *largest* description of blood-horses should be encouraged in the country.

The fourth speaker thought the horses of the neighborhood had been injured by injudicious breeding. The best and largest sized Lower Canadian horses, crossed on the best mares, would produce a stock that would be hardy in the extreme, and for all useful purposes could not be excelled. He had travelled much through the country for the purpose of purchasing horses, and had come to this conclusion from observation.

The fifth speaker thought all that had been said in favor of the Lower Canadian French horses was strictly correct. He was certain that no breed of horses would perform long journeys and the various servitude that was required, so well as the thorough or even half-bred Canadians.

The sixth speaker agreed with the speakers that had preceded him, that the Lower Canadian horses, crossed on the large Pennsylvania mares, would produce a most valuable description of stock.

DESCRIBING FRUITS.

THE increasing importance of fruit culture, as a source of commerce and wealth, as well as of domestic comfort, and the great consequent increase of attention given to it in all parts of the country, render the description and recognition of varieties which so numerously abound, a matter very much to be desired. The names of good fruits are often applied to bad, and of celebrated, to obscure varieties. It is hoped therefore, that every effort to remove the confusion and ambiguity which has been so common in describing fruits, may be found useful.

We are often furnished with specimens of this obscurity and want of accuracy. An instance was lately observed on looking over the pages of McIntosh's "Orchard"—a book standing quite high among British works on Pomology. Eight different sorts of *Nonpareil* are described in this work; the first is Braddick's Nonpareil, which among other things is described as "quite the Nonpareil shape"—what that is, is not stated. The next is the Golden Nonpareil, which is "in form, that of the Nonpareil group;" the Scarlet Nonpareil is in "form similar to other Nonpareils;" the Old Nonpareil is "flattish," the Martin Nonpareil is "nearly conical," the Ross Nonpareil is "roundish," the Sweeney Nonpareil is "irregular," and the Pitmaston Nonpareil is "compressed at both ends like all the Nonpareils;" while the colored figure represents the Scarlet Nonpareil as roundish, inclining to ovate or conical, and not at all compressed at the blossom end, the stem being invisible. On looking into Coxe, who gives figures of nearly all his apples, for information to reconcile, if possible, these contradictions, two varieties of Nonpareil are found, one of which is represented flat, and the other long-conical.

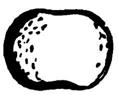
The comparison of one fruit with that of another by way of description, is not very satisfactory to a person of limited experience or observation, at the same time that it is very frequent in many works. The expressions, "Pearmain shaped," "Calville shaped," "form that of a Colmar," &c., though very intelligible to some, are to others about as perspicuous as Dr. Johnson's two famous definitions,—"wrong, not right," —and "right, not wrong."

Loudon, Downing, and others, have given some figures illustrating the meaning of terms; and with the hope of contributing a little to uniformity and perspicuity among the many who furnish descriptions of new fruits, some additional examples are given.

An apple is *flat* or *oblate*, when the height or distance from the stem to blossom, is much less than the (cross) diameter, as in the Rambo, fig. 1.

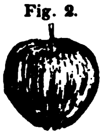
It is *round* or *roundish*, when the height and diameter are nearly equal, as in the Wine apple, fig. 4.

Fig. 1.



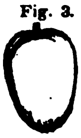
Oblate.

Fig. 2.



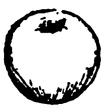
Roundish Conical.

Fig. 3.



Oblong Conical.

Fig. 4.



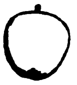
Roundish.

It is *oblong*, when the height is more than the diameter, and the sides are somewhat parallel, as in the Summer Pearmain, fig. 6.

It is *ovate* or *egg-shaped* when the height is greater than the diameter, and the form rounded and narrowed towards the blossom end, as in Bullock's Pippin, fig. 5.

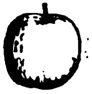
It is *conical*, when it tapers to the blossom end, without the sides being rounded, as the Cumberland Spice.

Fig. 5.



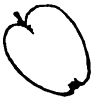
Ovate.

Fig. 6.



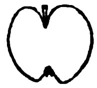
Oblong.

Fig. 7.



Oblong Ovate.

Fig. 8.



Pearmain-shaped.

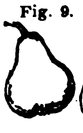
Different combinations of these simple terms apply to various other shapes; as *oblong-conical*, as in the Black Gilliflower, fig. 3; *oblong-ovate*, as in the Porter, fig. 7; *roundish-conical*, as in the Summer Queen, fig. 2; *roundish-ovate*, as in the Esopus Spitzenburgh and Baldwin; *roundish-oblong*, as in the Pennock, and Newtown Pippin; *roundish-oblate*, as in the Swaar and Rhode-Island Greening, &c. As most varieties approach the round form, and as a consequence are not so readily distinguished, as when of more striking forms, a closer observation and a greater number of examinations are needed to detect slight approaches to other forms.

The same terms may apply to pears and other fruits, but pears require in part a new set of terms, as,

Pyriform, (strictly pear-shaped,) with a considerable neck, as in the Andrews, fig. 9.

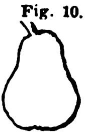
Obtuse-pyriform, the same in shape but more blunt or rounded, as in the Bartlet, fig. 10.

Fig. 9.



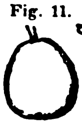
Pyriform.

Fig. 10.



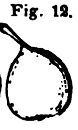
Obtuse-pyriform.

Fig. 11.



Obovate.

Fig. 12.



Turbinate.

Obovate or *inverted ovate*, as in the Virgalieu, fig. 11.

Turbinate, (or top-shaped, a term rather ambiguous among modern toy-dealers,) rounded, and slightly tapering to the stem, as in the Bloodgood, fig. 12.

Roundish, as in Bleeker's Meadow and Summer Rose.

Various combinations of these forms exist, as *obovate-pyriform*, in the Washington and Urbaniste; *turbinate-pyriform*, as in the Capiamont and Madeleine; *roundish-pyriform*, as in the Julienne and Summer Frankreal, &c.

The form of pears is sometimes described by comparison with others, as *Bergamot-shaped* or roundish, rather flattened and inclining slightly to ovate; *Colmar-shaped*, or obtuse pyriform, &c.

Apples are often described by the same mode of comparison, as *Calville-shaped*, conspicuously ribbed, and more or less irregular; *Pearmain-shaped*, roundish, slightly oblong-ovate, and something like a truncated cone, as in the Herefordshire Pearmain, fig. 8. The term *pippin* is applied to all kinds of apples, of every variation in color, flavor, form, and keeping qualities, and appears to possess no definite meaning.

J. J. T.

AN AGRICULTURAL SCHOOL.

……

MR. TUCKER—I was travelling through one of the best agricultural districts in the state of New-York in the month of July, when the fields were waving with the ripening grain, and all nature decked in smiling green, promised to crown the labors of the husbandman, with an abundant harvest.

At the public house where I stopped for the night, the conversation turned upon the subject of agriculture. I remarked to the landlord, who appeared to be a very intelligent gentleman, that the farms I had passed during the afternoon, appeared to be under a good state of cultivation, and that the general appearance, in relation to improvements, buildings, stock, &c., &c., indicated as much thriftiness and advancement, and I thought even more, than any section of the state I had previously visited.

He replied that this was the general remark of strangers, and that it was supposed to be in advance of any other section of the state; that a very great improvement had been effected within a few years, and it was believed on all hands, that it had been caused by the example of the agricultural school in the neighborhood.

It being the first intimation I had received, that an institution of that kind had been organized in that section, or even in the state, I was induced to make some inquiry, and received a long and interesting account of its management, so much so that I resolved to visit it the next day.

Accordingly in the morning, I drove a short distance and arrived at the agricultural school, and introduced myself to the principal, and spent most of the day about the establishment.

I found it to be a private enterprise. It had been organized about five years; the whole establishment being owned by its principal, who was a well educated, scientific, and practical farmer.

The farm contained two hundred acres, all of which, except one large lot containing 60 acres, was farmed in the very best manner by the proprietor; the dwelling-house was large, and the arrangements admirable, being sufficient to accommodate the family of the proprietor, and thirty students.

The building occupied as a school room, was neat and convenient, and well adapted to the purposes for which it was constructed, containing, in addition to study and lecture rooms, a spacious laboratory, and all the necessary chemical and philosophical apparatus for analyzing all the various soils.

In another room, I observed a large and well selected library, containing, in addition to all the best works on agriculture, the standard works on literature and general science; also most of the agricultural periodicals published in this country and Europe; together with a complete set of the back vols. of the Cultivator and Genesee Farmer, and a well arranged, and somewhat extensive geological and mineralogical cabinet.

Near the school room, was a building for storing farming implements and tools, all of which were clean and in good order, each pupil being required to keep the tools used by him in their proper places.

A field of sixty acres lay adjoining the school-house, which was divided by three alleys running through the whole, each alley being wide enough to drive a team along; the whole being then subdivided by narrow walks crossing the alleys at right angles, into plats, containing from a quarter to a half acre each.

Each student is permitted to till what land he chooses, (not to exceed three acres) of this field, and pays a stipulated rent for the same, and is taxed a certain amount per week for board and tuition, and is charged by the hour for a team, whenever it is found necessary to use one; and has the privilege of paying three-fourths of his board and tuition, and all his rent and team hire, in grain, vegetables, &c., &c., raised on his rented land, at a stated price.

Two professors, paid by the principal, have charge the indoor studies, consisting of all the branches usually taught in academies, and all that appertains to agriculture; and the proprietor, as Professor of Agriculture, directs the out-door operations.

A certain number of hours each day, are spent in the school-room, and an allotted time in the field, with the principal, studying practical agriculture; the balance of the day is spent in study, work, or such amusements as are deemed proper by the principal.

The proprietor occupied enough of the ground platted, to raise a sample of all kinds of grain, roots, and vegetables, for the purpose of instructing the students as to the manner and time of preparing the ground for planting and sowing each, and the method of tilling and managing while growing, harvesting, &c.

While cultivating the sample plat, all the students work together; for this labor, they are not paid, but it requires only a trifle of the whole time.

In this plat may be seen a small piece of winter wheat, spring wheat, rye, oats, barley, buckwheat, flax, peas, beans, corn, red-clover for hay and seed; clover to plow under for wheat, timothy grass, for hay and for seed; potatoes, turneps, and a little of everything.

For instance, when the proper time arrived to prepare the ground for onions, all assisted in preparing a small piece for the proprietor; there all learn how and when to prepare for their own crop; the same in planting, weeding, gathering, &c.

A nursery, consisting of the different kinds of fruit trees, is attached to the establishment; each pupil is instructed in the manner of raising every variety of fruit trees, from the seed to a bearing tree; including grafting, budding, pruning, and the best management of trees while in a bearing state, as well as the preventive and cure of all the diseases to which they are liable.

A well arranged flower garden, managed by the pupils, is included in the arrangement, and all are here instructed in ornamental gardening.

The farm is stocked with a specimen of the different breeds—including horses, cattle, sheep, swine, &c.; thus enabling the pupil to judge of the comparative merits of each.

Instructions for raising, training and feeding horses are given; also for raising, keeping, fattening, butchering and packing cattle, sheep, and swine; and the best method of preparing wool for market.

Convenient barns and out-buildings, for all the different kinds of stock are well arranged and kept in good order, including most admirable fixtures for poultry and bees.

Among the various articles of interest in the ware-room, I noticed several beautiful samples of maple, beet, and corn-stalk sugar, manufactured by the pupils.

It was a pleasing and noble sight, to see thirty young men leave the school-room, all at once, and step into the tool-house, each changing their shoes for a pair of thick boots, and their coats for a frock, and taking a hoe in their right hand, form in double file, in front of the building; the proprietor who had stood waiting, stepped in front, and at the word, all marched in regular order to their out-door labor, or lecture; every scholar exhibiting a healthy and robust appearance.

I was informed that some of the students were sons of the most wealthy men in the state; and that others had entered the institution without any means; but had rented and tilled the more land, and had raised produce sufficient to pay the whole of their expenses, including clothing.

All the produce, not consumed on the farm, was marketed in a neighboring city.

Each pupil kept a regular entry of all the business transactions between himself and the principal, and settled every six months, which answered the double purpose of adjusting the pecuniary transactions between the pupils and principal, and also to teach them correct business habits.

This institution appeared to me to be better calculated to impart a thorough and useful education, and at the same time a theoretical and *practical knowledge of agriculture*, than any establishment I had ever visited

It afforded me great pleasure to learn that this school had not only afforded several indigent young men the means of qualifying themselves for future usefulness, but had thus far been a source of revenue to its philanthropic proprietor, who by a judicious use of his means had thus been instrumental in doing so much good to his fellow men. I could readily understand how the example of this institution led to the agricultural improvement of the surrounding country, as it had daily visitors not only from our own but the neighboring states, and fondly hope that this example may be followed by others.

Here the village bell broke my slumbers, and I regret to add, that my awakened senses convinced me that the above is but a DREAM. E. C. F.

Sixth Senate District, March, 1846.

DIGGING WELLS IN SLATE.

A considerable portion of Western New-York is occupied by the slate of the Hamilton Group, most of which is covered with only a few feet of earth. This earth is the reservoir or sponge for holding the water, which falls in rain, and which, soaking downwards, forms springs and supplies wells. The upper surface of the slate rock being nearly even, the underground springs usually flow upon its surface. Hence, where the earth is shallow above it, and the water is thus carried to the surface, it oozes out in open springs. But from the thinness of this stratum of earth, these streams are often very small, and not unfrequently fail in drouth. As springs are rarely found in the body of the rock, considerable inconvenience is consequently experienced in dry summers from a deficiency of water. One of the best contrivances to obviate this difficulty we have seen, was lately adopted in practice by David Thomas, of Cayuga county, and is represented in section in the annexed figure. The well was made as follows:—It was dug after the common mode about seven feet in diameter, through ten feet of earth to the rock; and of the same size about as much deeper through the slate, until the latter became so hard that the pick would no longer penetrate. The water flows in abundantly during the wet part of the year, but when the season is dry the supply from springs nearly fails. A reservoir is however formed, by the water-tight rock, ten feet deep and seven feet in diameter. To obviate the necessity of nearly filling this reservoir with stones, as in the usual mode, a close scaffold or platform is laid across the well, resting on the upper surface of the rock, and covering entirely the space across the well. This is shown by the dotted lines. On this the workman stands, and commences stoning the well by laying the foundation on the rim of rock, which is for this purpose laid bare of the earth about one foot around. As he rises in building the wall, he gradually contracts its diameter, until it is drawn into the usual size, or to about two and a quarter feet. Every layer of stones forming a circular arch, it is perfectly impossible for the wall to fall, if the stones are of tolerably good shape for building; in the present case they were selected from those scattered over the adjacent fields. No mortar of course is used. When the stoning is finished, the scaffold is removed, and the well is done.

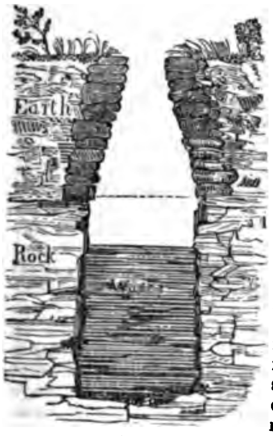


Fig. 47.

The chief advantages of this contrivance, are, it obviates stoning the lower part; it furnishes a large reservoir, so capacious that when filled in spring and summer, it rarely becomes dry by ordinary family use, in autumn; and the serious difficulty so often experienced with new wells for many months, by offensive matter dissolved from the stones, is entirely and at once removed. The mouth being small, it possesses all the advantages of coolness in summer resulting from narrow wells.

This rock forms large portions of Erie, Genesee, Livingston, Ontario, Seneca, Cayuga, Onondaga, Madison, Otsego, and other counties, and a knowledge of the preceding mode of digging and stoning, may be of very considerable advantage to many persons.

CONDENSED CORRESPONDENCE.

VALUE OF POUDRETTE.

J. SHERMAN, of Milton, Ulster Co., N. Y., states that he bought, in the spring of 1845, three barrels of D. K. Minor's poudrette, one barrel of which he used on corn in such a way as to test its profitableness. He put it on six rows of corn running though the field. At harvest, the yield of these six rows was carefully compared with the same number of rows alongside which had received no poudrette. The result was, that the six rows on which poudrette was used, gave *two bushels* of ears more than the other six rows—"making," he says, "the extra bushel of shelled corn, cost *two dollars*." The experiment, he says, reminded him of the man "who greased one of his shoes and left the other ungreased. The ungreased one gave out in the forenoon and the other in the afternoon."

USE OF GUANO.

A correspondent with the signature of "R.," who dates at Poughkeepsie, speaking of the experiments with guano and other substances, as given by Mr. Bradhurst, in our January number, says he was pleased with the *exactness* with which the experiments seem to have been conducted. Accuracy, he properly remarks, is very desirable, but too many, he thinks, "content themselves by stating the fact that they have used certain manures on different pieces of land without measuring either manure or land, or stating the mode or time of applying it, &c. Such communications do more harm than good." * * * "If you could induce all correspondents giving accounts of experiments to state proportions, weights, measures, mode and time of applying manures, cost, &c., you would greatly add to the usefulness of your paper."

In relation to the application of guano, he thinks the best way is to use it on land in "fair order," about 200 lbs. to the acre. As the guano "contains much coarse matter, bones of birds, shells, lumps, &c., he thinks it should be sifted, and then mixed with fine sifted coal ashes, or soil, at the rate of one part guano to three parts ashes or soil. "Let it stand in a covered barrel in a confined place from the air, for a week or ten days—then spread and plow it in immediately; or if used as a top-dressing it should be spread either during a rain, or with a prospect of rain soon, that it may be fixed in the soil to prevent the escape of ammonia.

"Lime should never be used with guano as a top-dressing, it causing the ammonia to escape; but when plowed in it is different, the ammonia being retained by the soil, as the guano decomposes.

"Persons purchasing guano should ascertain whether it is *imported* or *manufactured*, as it would make a material difference in the result of the experiment."

EXPERIMENTS WITH GUANO.

A correspondent, writing in reference to the experiments of Mr. Bradhurst, given in our January number, says—"There is evidently some mistake made in the quantity of poudrette used, or it was next to being worthless. The instructions given for the use of poudrette, are one gill to a hill of corn, and two gills to a hill of potatoes, and anything beyond that quantity endangers the crop. According to Mr. B.'s statement, he put in poudrette scattered along in the drill at the rate of $20 worth per acre, that is, at the rate of 54 barrels, containing 216 bushels, per acre. The poudrette, *if good for anything*, would have burned up and destroyed any vegetation that grows in the earth; and the *only reason* that the potatoes grew, if such quantity was put in the *one-one hundred and twentieth part* of an acre, was, that what he called poudrette was *literally worthless*. The potatoes must have been entirely enveloped in the poudrette, and every man, who has used good poudrette will say, that the potatoes never could have grown there.

"*Guano and poudrette* are like fire, good servants, but hard masters, and if not properly regulated will do more hurt than good. *Poudrette* has been used for more than 150 years, and by long experiments, its value in use has been tested and regulated. *Guano*, on the contrary, has not been sufficiently tested according to the relative value of the three kinds imported, and hence our farmers have burned up their crops to a very large extent by its use. I hope Mr. B. will re-examine his statement, and advise us what poudrette he used."

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DIGGING PEAT OR MUCK IN WINTER.

H. GOODHUE, West-Westminter, Vt., suggests, that as many peat bogs are inaccessible in summer, on account of their soft and miry nature, the winter season would be preferable for digging out the muck. The muck does not freeze so hard but that it may be easily cut into junks, and by using a sled, more may be carried away in a day than could be done with a cart. Besides, farmers in general have more leisure in winter to attend to procuring materials for manure, &c.

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RURAL ARCHITECTURE.

A correspondent, "R." of Poughkeepsie, writes—"I like the plan of Mr. Hyatt's cottage much, and hope to see that style of building come into more general use in this part of the country. It is cheap, neat, tasteful, and well adapted to most situations in the country where an elevated piece of ground with a few trees can be obtained; but for many situations it might be improved by enlarging the body of the building, and dispensing with the rear wing."

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RIBBON HOUSES.

A correspondent who appears to understand the business, furnishes the following account of constructing this kind of houses:

"The ribbon may be sawed from almost any kind of sound hemlock or other kinds of boards; knots or any thing of the kind making no difference. A fourth of an inch should be the uniform thickness of the ribbons; if it is more, the plastering will not adhere well. One-half of the stuff that is designed for the walls should be sawed four inches wide; the other half four and one-half inches. That for partitions, uniformly 3 inches wide.

"When the sills are laid, commence by nailing down a course of four inch stuff; next course should be of 4½ inch stuff, the outer edge being placed plumb with the one beneath it; and so proceed first with a four inch ribbon, then with a 4½ inch one until the walls are carried to the necessary height of the window stool; then he windows and frames may be put in, after which proceed as before, always remembering to break joints as in brick work. The partitions should go up as fast as the walls; the edge of the 2d course must jut over beyond the first, one-half inch; 3d course plumb over the first, 4th plumb over the 2d, and so on; this is done that the plastering may stick well without lathing. Every alternate course in the partition should extend through the wall and be well nailed.

"When the walls and partitions are carried to the required height, the beams may be put on without plates. The rafters should rest on the ends of the beams. All the ribbons should be nailed with eight-penny nails. It should be clapboarded the same as framed houses. No lathing is necessary if the materials are sawed as directed. No braces or studs are required.

Many have built in this way in these parts, and affirm that it is a much better way and more economical than the old method. To build a two story house 30 by 36, it requires not far from 10,000 square feet, or about 30,000 feet in length of ribbons."

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AGRICULTURE AMONG THE CHEROKEES.

WE have several times alluded to the favorable indications of improvement in agriculture and the domestic arts, exhibited by the Cherokees. We have had fears that the late disturbances among that people might tend to repress the spirit which has been so favorably manifested. A letter lately received from Mr. STEPHEN FOREMAN, (enclosing fifteen subscribers to the Cultivator,) informs us that, though the excitement has had to some extent, an unfavorable effect, yet he has reason to hope that the "unpleasant state of things will soon pass away." Mr. F. says—"During last summer, quite an interest was taken in the organization of an Agricultural Society, called the Agricultural Society of the Cherokee Nation; the account of which I presume you have seen in the *Advocate*. Between seventy-five and a hundred dollars were subscribed and partly paid over, to constitute a fund to be expended in carrying out the objects of the society. This is but a small beginning, but we hope for better days."

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FARMERS IN MISSISSIPPI.

THEODORE GILLESPIE, of Springfield, La., gives us some notes of a trip through a portion of Mississippi. He says, that in a journey of three hundred miles in that state, he found three farmers who had adopted the motto, "*Order is Heaven's first law.*" At these places, he observes, "all the houses and cows looked fat and comfortable. The negro-houses were in regular rows; the barns comfortable; stables dry; corn-cribs full; gins with good sheds and scaffolds; fences neat and well staked; fat hogs enough for the year's meat; negroes well clad and comfortable; and to conclude, a good *dwelling house*. And here the *wells*, I must remark, were about the kitchen. At these places one could discover a regular course of business—everything being attended to in its place—among others was the little homespun manufactory, which I very much admired. The average of cotton made on these plantations was about six bales to the hand."

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THE PAST WINTER IN GEORGIA.

A. POPE, Washington, Georgia, writes under date of Feb. 18th:—The present has been such a severe winter with us at the south, and food is so scarce, that many of our largest planters have already lost a good many of their cattle and hogs. Should the winter be a protracted one, there will necessarily be much distress among the poorer classes of our population, who have neither the money nor credit to purchase with. Corn-meal is selling for one dollar per bushel, with an upward tendency. We have had so much bad weather that we are very much behind with our plowing. Wheat looks very badly. Oats sowed last fall have been killed. Rye is very unpromising, and taken altogether, our farmers have a pretty gloomy prospect before them."

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GAPES IN CHICKENS.

A correspondent informs us that his chickens were last spring much affected with gapes, by which many died. He finally tried the plan of putting a feather down the wind-pipe, as recommended by E. F. Morton, (Cultivator for 1844, page 305,) for the purpose of drawing out the worms which it is thought occasion the disease. After this plan was resorted to, no more chickens died.

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USE OF CARPENTER'S TOOLS BY FARMERS.

"J. P." says—"Every farmer should be a carpenter." We have repeatedly recommended in the Cultivator, that farmers in general should be prepared to execute mechanical work of various kinds. J. P. suggests various advantages resulting from this mode, for which we have not room in detail. He very properly remarks that the farmer who is well provided with carpenter's tools, and is accustomed to their use, will be more likely to keep his buildings and fences in order, than one who is not provided with such tools. In the one case, he says—"the rotten rail fence will gradually be replaced by a neat board fence. His horses, cattle, and sheep, will be protected from the storm by neat and economical buildings; his farming tools will all have a proper place when not in use; even the old wagon will have a place under a protecting roof."

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MACHINES.

C. EASTON, of North East, Pa., suggests that a machine for planting wheat in rows would be very useful—the drill mode of cultivating wheat being, he thinks, preferable to the broad-cast. We have seen several machines used for this purpose, some of which work very well. In our last number, (page 127,) mention is made of one used by Mr. Noble of Ohio, which sows six rows at once, and which we have no doubt is a good machine.

Mr. Easton also suggests that "every farmer should have a machine with which he could thresh his own wheat, cut his straw, and with the same power and a burr saw, cut his wood, when he had nothing else to do." He also thinks, "if a farmer would cut his wheat straw, return it to the ground, and plow it under, he could raise wheat year after year, by adding a little more, and have his ground grow better."

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FLAX AND BARLEY SOWN TOGETHER.

F. L. E. writes—"In a conversation with a gentleman from Montgomery county yesterday, he informed me that a number of farmers in the town of Florida, had made the experiment in sowing flax-seed and barley together, and in every instance succeeded admirably—that he sowed himself (on a certain piece of land, not specifying the amount,) ten bushels of flax-seed and eight bushels of barley, which produced one hundred and thirteen bushels of seed and eighty bushels of barley. He also informed me that his cattle eat the flax and barley with a good relish."

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FRUITS OF INDUSTRY.

A correspondent with the signature of "MOUNTAINEER," whose residence is at Washington, D. C., details the course he has pursued in bringing into cultivation twenty acres of sterile land which he has purchased in that vicinity. His improvements have all been made by his own hands; and as he is in the employ of the government, and is obliged to devote ten hours in each day to his official duties, the work has been wholly performed, as he states, "between the hours of five and seven, morning and evening." Yet by constant application he has managed to make a fine garden, well set with fruit trees, grape-vines, and shrubbery, and is almost daily extending his improvements. In view of what he has accomplished he remarks—"It is surprising how much one may do by diligently improving every moment. To make the most of time we must *systematize* it, and never cease to remember that a minute idly spent is money dropped, which, grasp after it eagerly as we may, we never can pick up again."

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SETTING POSTS.

Mr. WM. ANSLEY, of Potter, Yates county, N. Y., gives us the mode he practices in setting posts. After the hole is dug and the post set in, he puts in just earth enough to stay the bottom, and no more, filling the hole with small stones, pounded down. He claims the following advantages of this mode: First, that the fence, whether of boards or rails, is less likely to be affected by winds and frost; second, greater durability of the posts than when they are set in earth.

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YIELD OF BUTTER.

J. P. FAIRBANKS Esq., informs us that at a late meeting of the Caledonia (Vt.) Ag. Society, FRANCIS E. FULLER, President of that society, stated that during the past year, he had made from ten cows 2118 lbs. of butter, (211¾ to each cow.) Besides the butter, he made 100 lbs. of cheese, and raised five calves. One of the cows had been farrowed for two years. It is added that the butter brought the highest market price for the table. If any body has beat this with the same number of cows, constituting, as in this case, the whole dairy, we should like to hear from them.

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USEFULNESS OF TOADS.

GEO. HUSSEY, Terrahaute, Ia., in reference to an article under the above head, says—"Not only the toad, but the whole family of lizards are useful in our gardens, and more so in our orchards, as they climb the trees after their prey, which are insects of all kinds, of which they devour great numbers; they are so quick and shy that it is not easy to observe their manner of feeding, but while they lie perfectly quiet in appearance, they are busily filling their stomachs with insects that we can scarcely discern."

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BUCKWHEAT WITHOUT GRIT.

B. M., of Grand Isle, Vt., manages buckwheat as follows:—Cuts it with a cradle; a hand follows the cradle with the rake, gathering into bunches, setting them up on the butts, and twisting the tops together with the hands. If it is wet at the time it is cut, he thinks it all the better, as it will not shell as much, and the wind will soon dry the bunches. When carried to be ground, it is passed through a smut mill.

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THE RIGHT SPIRIT.

A young man in Vermont who has got us several subscribers, writes:—"Though I am a boy of only 18, the interest I take in agricultural improvement is great. I should be glad to be one of the best farmers in the United States, and I mean to be if Providence smiles on my efforts and grants me the blessings of health and strength, although I am without capital, and am situated in the midst of the Green mountains."

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J. W. PADDOCK, of Wyoming, N. Y., writes—"I have taken your paper for three years, and I would not do without for three times its cost. In 1844, I raised 229 bushels of ears of corn on an acre of land, and I do not think I should have done it, if I had not taken the Cultivator."

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CULTURE OF THE ENGLISH WALNUT.

Mr. WM. JENISON, of Cambridge, Mass., thinks the culture of the English Walnut would be a lucrative business for the farmers of Pennsylvania, Maryland, and Virginia. He states that he has known a single tree to produce 24 bushels in a season.

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PEAS AND BEANS.

From the prices which these articles usually bring in Boston, I should think their cultivation might be attended with profit. Dried beans bring six to eight cents per quart, whole peas eight to ten cents, and split peas twelve and a half cents. [We presume these must be retail prices.—ED.] The Russian green peas, so called, bring fifty cents per pound, or $25 per bushel. These peas are brought here in a fresh state. Have any attempts been made to produce this article in the United States? (Extract from a letter from Wm. Jenison, to the Cult.)

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ALLOWING MALE ANIMALS TO RUN AT LARGE.

Great inconvenience, as well as positive injury is often experienced by bulls, rams, &c., being permitted to run at large on the highways, or from the want of being properly secured by their owners. In some states we believe special provision has been made by statute, in relation to the matter, and we think protection against the practice should in all cases be provided.

Our attention has just been called to this subject by a letter from a correspondent, giving an account of the damage which had been done to a valuable flock of Merino sheep by a "coarse native or mongrel buck," which in August last got into the pasture, and before he was discovered, had, as the sequel proves, done much injury. More than thirty lambs of his get have already made their appearance, and it is stated there is a prospect of more. They were from breeding ewes of the best quality, which would have brought, had they been put to the buck which the owner intended, the most valuable stock for breeding; but as it is, the lambs are of no value in this respect.

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RECEIPT FOR DYSPEPSIA.

C. C., of Union Vale, sends us the following receipt, the efficacy of which he vouches for:—"Make one quart of wormwood tea, and add to it one pint of best St. Croix rum, and brown sugar to the taste. It should be taken two or three times a day, from a fourth to half a gill at a time."

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R. Johnson, of East-Groveland, N. Y., states that he grafts or buds roses in the spring as soon as the bark will peal. This he thinks has the advantage over summer budding, as there is more sap in circulation, and the bud is less liable to dry.

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John S. Yeomans, of Columbia, Ct., informs us that George Williams of that town killed a hog last fall eighteen months old, that weighed 660 pounds. We are not informed of what breed this hog was, but it is intimated that he was *not* of the "land-shark" race.

ANOTHER EGG-LAYING STORY.

……

Having seen frequent articles in your paper where the Poland Top-Knot fowls were highly recommended as layers, I was induced in the spring of 1844 to purchase some eight or ten of them in order to test the differences, if any, between them and the common breed. From observation I soon became satisfied that they were rightly called "everlasting layers," from the fact that while the latter were continually annoying me with a desire to sit, the former showed no signs of it, but continued laying during the whole season. I raised a number of chickens during the summer, and in the fall found my number of Top-Knots had increased to 30, including two cocks. The balance of my poultry I disposed of, and more out of curiosity than any thing else, I concluded to keep an exact account of eggs received for one year, from Jan. 1, 1845. My number averaged but twenty-six, five of them having died during the year. My receipts were as follows:

January,......	135	July,.......	361
February,....	142	August,.....	311
March,........	418	September,..	284
April,.........	549	October,....	104
May,..........	566	November,..	51
June,........	534	December,..	32

Making .... 3,487 eggs.

Reckoning them at one shilling per dozen, which price they command three months in a year in our market, they would amount to the sum of,........ $36.32

Deduct 13 bushels each of corn and barley, at 40 cts.,.................................. 10.40

Leaving a balance of.................... $25.92

My yard occupies about one square rod of ground, a part of which is enclosed with rough boards to afford them shelter in stormy weather, and containing their nests and roosts, with an abundant supply of lime, sand, gravel, food and drink, which is always before them. They are not allowed to run out during any part of the season, and their desire for animal food is satisfied with now and then a sheep's pluck, and a supply of sour milk, of which they are extremely fond.

As regards the preservation of eggs perfectly fresh, and with very little trouble, for six or eight months during the year, or from March to December, I would recommend the following, having thoroughly proved it the past season:—*For every two galls. water add three* [illegible] spoonful of cream of tartar. Let the keg stand in a cool part of the cellar, putting in your eggs from time to time, and brine sufficient to cover them. If they are fresh when put in, they will come out so after any reasonable length of time, as fresh and handsome as new laid eggs. Yours, &c., Joseph Annin.

Le Roy, Genesee Co., N. Y.

HEMP AND FLAX DRESSING MACHINE.

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Mr. Tucker—In the last number of the Cultivator you ask information respecting a "machine for dressing and breaking hemp and flax, said to have been presented at the exhibition of the American Institute last fall, by Mr. Billings, of New-Hampshire."

I presume you refer to the hemp and flax breaking and dressing machines, invented by Messrs. G. W. Billings and John Harrison, of Missouri, as they were exhibited at the last Fair of the American Institute, by Mr. Billings, and received the flattering award of a gold medal. Having been employed by Messrs. B. & H. to prepare their drawings and papers, and to transact their business at the Patent Office, as their agent and attorney, I take pleasure in giving you the information you desire. Messrs. Billings and Harrison secured three patents—one for a method or process of water-rotting hemp or flax, which they perfectly accomplish in from three to four days, without injury to the health of the workmen employed in handling it, or to the neighborhood where the operation is carried on.

Their second patent is for a machine for breaking and scutching hemp and flax, which operates as follows:—The hemp or flax is placed upon a revolving endless apron, which conducts it between a pair of pressure rollers, (the pressure being very great;) from these it passes between a series of fluted rollers, and thence it emerges on to a series of rotating blades or knives, the ends of which are secured in a radial position in circular heads. Over the rotating knives, and parallel with the same, are arranged three vibrating knives, so arranged and combined, that they strike in succession one after the other, between each of the rotating knives; thereby giving the hemp or flax a thorough scutching while passing from the fluted rollers, by the double action of the rotary and reciprocating movement of scutching blades.

Messrs. Billings & Harrison's third patent is for a revolving hackle. It is constructed and operates as follows:—The hackle teeth are arranged upon a cylinder in continuous rows, commencing at the centre and diverging spirally to the right and left around the same to the ends of the cylinder. In front of the revolving hackle, an elastic rest is placed at a suitable distance; the hemp or flax to be operated upon by the hackle is placed between the centre of the rest and the toothed cylinder; the peculiar arrangement of the hackle teeth causes them to open and spread the substance acted upon gradually to the entire length of the rest, thereby insuring a thorough and equal action upon every part.

By the aid of Messrs. B. & H.'s inventions, hemp or flax may be water-rotted, broken, dressed, and baled, in merchantable order, ready for market, in the space of a week from the time of its being taken from the field. Respectfully yours, Z. C. Robbins,

Mechanical Eng'r and Agt. for procuring Patents.

Washington, D. C., April 14, 1846.

"FRUIT FOR COOKING."

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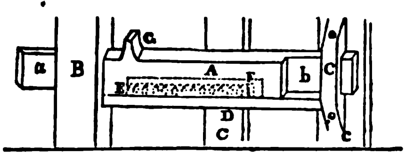
If W. R. Prince will examine the article on "Comstock's Garden Apple," and judge a little less hastily and superficially, he will see that I have not "fallen into a very great error." I never denied that some fruits not fit for eating, were not good when cooked, *provided*, (and here is his great mistake,) *plenty of sugar and spices are added*. Many kinds of good table fruit need no sugar and spices for flavoring them. Let him read my article over again and he will see what I mean.

The writer who described

Comstock's Garden Apple



GATE LATCH.—(Fig. 78.)

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I send you a description of a cheap and efficient gate latch. There may be better; but for the cost or labor of making, I know of none I consider equal to it. Any one who can use tools can make it. It acts so quickly, that when the gate is thrown shut it rarely fails to catch.

A, the latch, 10 or 12 inches long, and 1¼ square, with a shoulder at each end, made by reducing the thickness to one inch at *a*, and ¾ of an inch at *b*. Into the under side of the latch, a mortice is made six inches long, and ¾ of an inch wide, and of the same depth, to receive a spiral wire spring. The mortice and spring are shown by dotted lines, being hid entirely from view. The spring is made by wrapping a cold wire round a stick half an inch in diameter. B is the head-piece of the gate, with a hole morticed for the latch; *c*, *c*, palings; C, collar piece to hold the latch. D, cross-piece under and in contact with the latch, to keep the spring to its place; and into which is inserted the peg F, which holds one end of the spring, and which causes the latch to fly back to its original position after being drawn back by the thumb-piece, G.

Knoxville, Tennessee. D. A. D.

INQUIRIES.

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Hot air furnaces.—E. H. O. (Petersburg, Va.) Between this and autumn, we hope to be able to give an article which shall embrace the particulars you wish.

Culture of the Cranberry.—We will give an article on this subject shortly.

Suckers on Corn.—C. B. (Redford, Mich.) We have made some experiments to ascertain whether there is any advantage in cutting suckers. We have cut the suckers from alternate rows, and compared the product with the uncut rows at harvesting, but have never been able to see any advantage from cutting. But something may depend on the kind of corn—some kinds giving ears on the suckers, and others not,—and something also, may depend on the thickness at which the corn is planted—if too thick, thinning, by taking out the suckers, might be an advantage.

Black Sea Wheat.— "A Subscriber," (Stokes, N. Y.) This is a red, bearded wheat—the kernel rather round. But to give a description by which this may invariably be known from all other kinds, would be impracticable.

The Poppy.—J. C. A. (Brutus, N. Y.) We are unable to give much information on the culture of the poppy, or the process of extracting opium therefrom. We doubt whether it could be produced to profit in this part of the country, as the heat of tropical climates is said to be required to give strength and potency to the juice. The kind called the white poppy, (*P. somniferum*,) is we believe preferred for its narcotic qualities, but we cannot say where the seed can be procured.

Shell Marl.—A. H. H. (Westmoreland, N. Y.) The marl you speak of may be spread on grass-land in the fall. When from such situations as you describe, it seems to be an advantage to expose it awhile to the air before using—after which it forms a good top dressing for most crops.

Rye—Sowing grass-seed.—W. H. W. (Halifax co., N. C.) We think rye is as favorable to grass as any other grain, excepting, perhaps, barley. We have sown grass-seed with winter rye, sown early in autumn, on dry ground, with good success—and have no doubt it would do well with spring-rye. The quantity of winter rye usually sown per acre is one and a half bushels—probably two bushels of spring rye per acre would not be too much. As to the kinds and quantity of grass-seed, we do not see that we can give any information in addition to that offered on page 94, current volume. The course you suggest as to plowing in peas, &c., is apparently a good one.

What food will produce most wool?—L. D. (Richfield, N. Y.) Mr. Morrell, in the American Shepherd, page 230, gives the results of an analysis by De Raumer, from which it appears that

1000 lbs	potatoes	produced	6½	lbs wool.
"	mangel wurzel	"	5¼	"
"	wheat	"	14	"
"	oats	"	10	"
"	barley	"	11½	"
"	peas	"	14¼	"
"	rye with salt	"	14	"
"	do. without salt	"	12¼	"
"	buckwheat,	"	10	"

Mr. M. adds in reference to the above—"The legitimate conclusion from the foregoing is, that the flock-master, whose object is wool only, must rely on good hay and some straw, whose constituents are admirably adapted for the growth and perfection of wool, with a moderate allowance, daily, of ground peas and oats, and some potatoes as green food."

Flour from Black Sea Wheat.—"A Subscriber," (Livingston, Alabama,) writes to know "what improvements have been made in the manufacture of flour from Black-Sea wheat?" as he has seen it stated in the Cultivator that it was supposed to make inferior flour *till the millers learned how to grind it*." Will some of our friends inform him?

Chinese Geese.—J. T. (Urbanna, O.) These geese can be had here in course of the season, duly caged, &c., at $5 to $6 per pair. They could be forwarded by canal to Columbus.

Knitting Machine.—J. T. We know nothing more than what has already appeared about it.

Works on Horticulture.—E. W. H. (Macomb county, Mich.) Downing's "Fruit and Fruit Trees of America," is a work of 590 pages—price 1.50. The "Fruit Culturist," by J. J. Thomas, (noticed in our last,) is 50 cents. They are for sale at most of the book stores.

Cement Pipes.—M. I. (So. Hartford, N. Y.) We have never supposed that the mode of making cement pipes, as described in the January No. of the Cultivator, was patented, and presume you run no risk in constructing pipe according to those directions.

"Sugar Parsnips."—J. E. H. (Huron county, O.) We do not know any variety of parsnip by this name. We suppose the "comparative value" of the root might be in a great degree proportionate to the sweetness.

Use of Lime.—G. W. C. (Campbell co., Va.) We think lime is of the greatest benefit to soils containing the greatest amount of organic matter. We should apply to a plowed surface, and not work it in deeply.

Charcoal for Manure.—S. H. (Mercer, Pa.) On moist grass-land, the refuse charcoal you mention would be a good top-dressing—on dryer soils, and for cultivated crops, it might be harrowed in. Our opinion is, that "it doth not yet appear" to what principle its fertilizing action is due; but there is no doubt about the effects. Charcoal is also the best article for absorbing the liquids of your stables and yards. The leached ashes you speak of, will be found valuable on most soils as a top-dressing—especially on sandy and gravelly loams.

Wet Land.—J. D. B. (Murfreesboro', Tenn.) We hardly know what could be done with the land you mention. Are you sure it cannot be drained by opening the natural outlet? If it can be drained, it seems from your description that it would be good land. A little experiment will determine whether the soil would be valuable on upland fields.

Grafting Grape Vines.—A. C. (Edgartown, Mass.) Mr. Downing directs that scions be cut in winter and kept buried in a cool damp cellar till wanted. About the tenth of June, or as soon as the leaves of the old vines are fully expanded, cut off the stock smoothly below the surface of the ground, split it and insert one or two scions in the usual manner, binding the cleft well together if it does not close firmly. Draw the soil carefully over the whole, leaving two or three buds of the scion above the surface.

AGRICULTURAL MEETING IN HOMER.

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PRESENTATION OF A SILVER CUP TO MR. WOOLWORTH.

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At a meeting of the farmers and citizens of Homer, at the close of Mr. Woolworth's course of lectures on Agricultural Chemistry and Geology, in March, it was resolved that, as a testimony of gratitude and esteem, they present him with a silver cup. A committee, consisting of Messrs. Paris Bafber and George W. Chamberlain, was appointed to select and purchase the cup. A committee was also appointed to prepare resolutions expressive of the sentiments of the meeting, consisting of Dr. E. Munger, Mr. Amos Rice and Dr. C. Green.

Pursuant to a call of the committees, the farmers met in the Academy Hall, on the evening of the 14th inst., Mr. Paris Barber in the chair. There was present a large and respectable audience of ladies and gentlemen. The committee on resolutions presented the following report:

Whereas, S. B. Woolworth has, during the past winter, given a course of lectures on Agricultural Chemistry and Geology, in the lecture room of the Academy, and has politely and generously given to the farmers and citizens in the vicinity, the privilege of attending the course gratuitously; and whereas we recognize in this first effort, in this country, of imparting to the cultivators of the soil a knowledge of Chemistry as applied to agriculture, an advance towards that eminence to which we believe the farmers of New-York will ultimately arrive; therefore,

1. *Resolved*, That we have been highly gratified in listening to this very able, lucid and practical course of lectures; that we have felt ourselves instructed in the great "art and mystery" of farming, and believe we may by adopting the principles laid down by the lecturer prosecute our high and noble calling with a fairer prospect of success.

2. That this effort of Mr. Woolworth has not been that of an *adventurer*, for knowing the practical bearings of the principles of Agricultural Chemistry, he was willing to become a laborious pioneer in the noble enterprize of imparting chemical and geological science to farmers, and that, therefore, our gratitude is doubly due to him for this course of lectures.

3. That the clear and familiar manner in which these subjects have been presented—rendering them readily understood by those who had not hitherto attended to Chemistry as a science—fully demonstrates the practicability and usefulness of such courses of lectures.

4. Therefore that we earnestly recommend the institution of a similar course of lectures and instruction as that given by Mr. Woolworth in each of the various academies and high schools of our State, believing most firmly that the effect would be a most marked elevation of the condition of farmers both in point of respectability and wealth.

5. That the objections to "book farming" cannot exist in the minds of those who are acquainted with the principles of Chemistry and Geology and their application to agriculture.

6. That as a testimonial of our gratitude and esteem, we present Mr. Woolworth with a silver cup, of which, though it by no means measures the extent of our regard for him, we beg his acceptance.

The report was followed by a short but highly interesting address by Mr. A. Rice, on the improvements in agriculture within the last quarter of a century. It was truly gratifying to listen to his account of the rapid progress in every department of farming within the last 10 or 15 years, and contrast it with the comparatively low condition in which it existed 30 years ago. What may we not expect, with the present ratio of improvement in the next 25 years? Mr. Rice having been selected by the committee to present the cup, closed his remarks by a neat and appropriate address to Mr. Woolworth, presenting him a plain but elegant silver cup, bearing on it an appropriate inscription. This was acknowledged by Mr. Woolworth in a few chaste and cogent remarks, stating among other things of interest, that in the course of lectures alluded to, he had presented only some of the leading principles of agricultural science, but that he designed, at the next winter session of the Academy, to enter more fully into the subject and present it in a more extended manner.

We trust that these laudable efforts of Mr. Woolworth will be seconded by a full representation of farmers' sons in the Laboratory, and encouraged by the presence of the tillers of the soil in the vicinity.

A committee was appointed to prepare an account of these proceedings and secure its publication in the papers of the county and the agricultural journals of the State. By order of the committee,

Homer, April, 1846. C. Green, *Chairman*.

CORN FOR FODDER—INQUIRY.

……

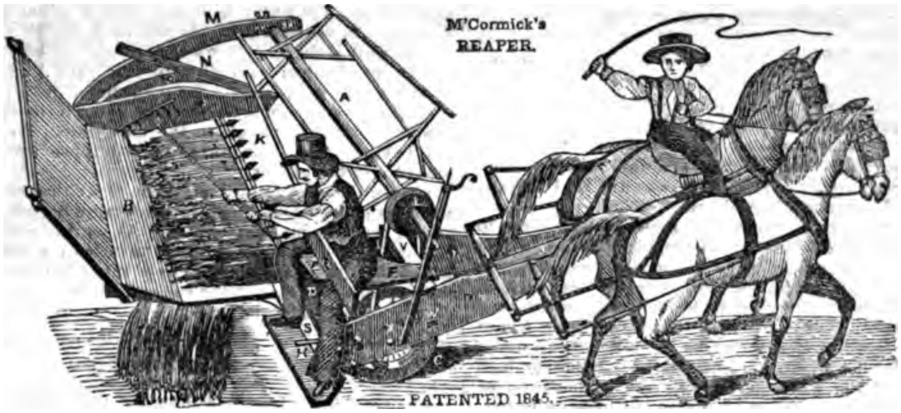
I sowed some two acres of corn the last year, with the design of soiling my milch cows during the dry weather, and short feed of the latter part of summer. But the drouth cutting off the hay crops, I was compelled to keep the corn for winter fodder. It was sowed on sward land, turned neatly over and well harrowed. The yield was heavy, (notwithstanding the drouth,) full seven tons of cured fodder to the acre. My cattle prefer it to any other food I have. They will leave pumpkins, potatoes, sugar beets, &c., to eat the corn-stalks when both are in the mangers. The saccharine matter is abundant, and if I had enough I should not regret the loss of my hay, nor fear for the cattle, this severe winter. I cut it when in the tassel, and when the more scattering stalks began to silk. It cost me about four days labor with two yoke of oxen to prepare the ground and sow the seed, and full six days labor to harvest an acre. And hence comes my inquiry. Is there any easier or cheaper way to harvest it than to reap the stalks, bind in small bundles, and stack them up to cure. This was the way I did; but it was very hard work, and took a long time. To cradle it was impossible; and I had no so hard work on my farm as the reaping and stacking an acre in six days. Has any one found a better way; if so, what is it? The stack (eight bundles) I let stand full six weeks before putting the corn in the barn; and now it is in fine order. It takes corn fodder a long time to cure. *Ohio, January,* 1846. H.

VALUE OF COB MEAL.

……

Mr. Editor—It has been the opinion of most farmers, that corn cobs were of little or no value, and they have generally thrown them aside as of no use except for manure. The experience of some who have formerly fed corn and meal; and the anticipated scarcity of hay has led nearly all of our corn growers to turn their cobs into food for their stock. To show something of the extent which it has been used here, the following will give you some data to judge from. One mill in this town has, within the last three months, ground more than 5000 bushels of cobs, besides a large quantity of corn in the ear. This fact, I think, proves quite conclusively that cob-meal is valuable as an article of food for stock. Indeed the opinion which is expressed by those who have used it, is altogether in its favor. When they get out their corn, it is not threshed entirely clean; some 3 to 15 bushels of corn is left on the cobs. They are kept clean as possible till ground into meal. Cattle, horses, sheep, and hogs, eat it readily, without adding other grain. When fed to cattle in addition to hay, a marked difference in their condition and appearance is seen, from those fed on hay without the meal. Some feeders mix it with other grain, roots, &c., with marked profit and success. When fed with oil-cake, it is found to answer an excellent purpose, as it takes up all oil without waste.

Earlville, N. Y. G. W. B.



M'CORMICK'S REAPER.

This machine was patented in 1845, by C. H. M'Cormick, of ————, Virginia. It has been extensively used in most of the grain growing States of the Union, and if we may judge from the numerous certificates of those by whom it has been tried, it is a very effective and valuable implement. By reference to Mr. M'C's advertisement, to be found in this number, it will be seen that the machine is warranted to cut from fifteen to twenty acres of grain in a day, and at a great saving of expense over the common mode of harvesting.

DESCRIBING FRUIT.

Ed. Cultivator—Allow me two or three comments on H. W. Beecher's excellent remarks relative to Downing's "Fruit and Fruit Trees of America."

He intimates that "*saccharine flavor*," means *sweet*; it is true that ought to be its meaning, but it is often applied to acid and sub-acid fruits. As examples, see the descriptions of the Alexander, Ribston pippin, Baldwin, Fall pippin, and other apples in Kenrick's Orchardist, which are all termed *sugary* or *saccharine* in flavor; and also Summer Queen, a quite sour apple, which Kenrick describes as "*sweet*." Many instances might be given in other writers, did time permit. I mention this point, to show the miserable looseness which has prevailed with nearly all pomological writers, relative to the unvarying and most important distinctive test of varieties, the flavor.

He says "a highly improved and luscious pear, not unfrequently is wholly seedless, while fruits not far removed from the wild state abound in seeds." Are there not too many exceptions to this rule, on both parts, for its correctness? The Seckel is regarded the richest of all pears, and is full of seeds; while some worthless seedlings have little or no seed.

An experienced person can often know a variety by the appearance of the young wood and growth of the tree, and nurserymen usually know at a glance the different varieties they cultivate, without seeing the labels. Hence great stress is laid on the importance of this distinctive trait in describing fruits. But a serious difficulty is not noticed. However well we may know varieties after we are familiar with their appearance by personal inspection, it is next to impossible to convey a knowledge of those appearances in words. We know a familiar acquaintance at the first glance of his face; and hardly a man exists but knows a thousand persons by looking in their faces, even though their names are not written on their cheeks; but the most minute description of the features would fail to convey a distinctive knowledge of the appearance of an individual. The light hair, the grey eyes, the bushy eyebrows, the hooked nose and sharp chin, might apply to fifty individuals, while that peculiar undefinable *expression* which cannot be described, is more characteristic than all. It is precisely the same with the appearance of varieties in trees; when once familiar, we know them well; but the points of distinction are too untangible to describe with precision. Hence this character, though useful, is not of the greatest importance.

J. J. T.

PROP FOR CLIMBING PLANTS.

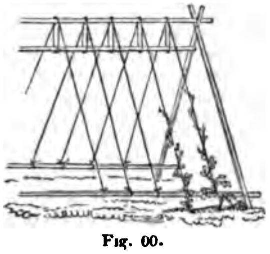


Fig. 00.

The annexed figure represents a very convenient support for any climbing annual plants, whether useful or ornamental—it may be used for running garden beans, or for the ornamental Ipomeas, as the morning glory or cypress vine.

Stretched cords are frequently used, as being often cheaper where extensively used, and possessing also a lighter and more elegant appearance. But their contraction by wet, where the cords are fastened to pegs in the ground, sometimes draws the plant up by the roots. The above represented contrivance removes this difficulty, and is at the same time very expeditiously made. Take narrow strips of board, or lath, and fastening two of them together by a nail near the top, as shown in the figure, and spreading the lower ends so as to form a moderately acute angle, stick them into the ground. Two more are arranged precisely similar, (not represented in the figure,) and placed at several feet distance from the former. These are connected by similar pieces of lath at the bottom, on each side, three or four inches from the surface of the earth. A slender, round pole is also laid on the short fork at the top formed by the intersection of the upright laths. Cords, all of equal length, are then tied to the lower horizontal pieces, and passed once round the upper horizontal pole, so as to form a hanging loop about a foot in length. Through these loops a pole is thrust, and sufficient weights hung upon it to keep the cords always sufficiently stretched; and which will rise and fall with the contraction and expansion of the cords. In this way, in fact, the pole by rising and falling, serves as an imperfect hygrometer.

Very cheap cords, lasting one summer, may be made by twisting strings of bass, which is made by soaking the bark of large basswood trees a fortnight in water, peeilng off the inner portion, and then soaking the remainder a month and peeling the rest. The bark may usually be had in abundance in the early part of summer, at saw-mills, and must be perfectly fresh from the log when it is immersed in water.

A cat, after being twenty-one days under hay, without food or drink, has completely recovered.

NOTICES OF NEW WORKS.

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The Farmer's Dictionary: a vocabulary of the technical terms recently introduced into Agriculture and Horticulture from various sciences; and also a compendium of Practical Farming; the latter chiefly from the works of the Rev. W. L. Rham, Loudon, Low, and Youatt, and the most eminent American authors. By D. P. Gardner, M. D. Harper & Brothers, New-York.

The first design of this work, seems to have been to furnish a short explanation of technical terms which have latterly been introduced into agricultural writings. The author well remarks, that a great "drawback to the advancement of our art is the indefinite words used among us." Thus "we find," he says, "one writer using the word 'withers' for the shoulder of an animal, another for the womb." So far as we have examined that part of the work devoted to the explanation of technicalities, it seems to have been judiciously executed, and will no doubt be found very useful. The various tables showing the analyses of the ashes of plants, will no doubt be found valuable. The *practical* part of the book, is almost wholly a compilation from English authors. How far the matter contained in this part may be applicable to this country, we are hardly able, from present examination, to say. We shall probably recur to the work again.

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American Journal of Science and Arts.—The number of this valuable periodical for March has been received. Though we cannot notice the contents in detail, we remark that they are particularly interesting. In an article by Wm. M. Carpenter, on some Fossil Bones, found in Tennessee and Texas, we find that the "*Gigantic Fossil Man,* eighteen feet high," said to have been found in Tennessee, such astonishing accounts of which have been spread through the country in the newspapers, turns out to be the skeleton of a *young mastodon*. In the same article, a description and cut is given of part of a skull, horns, and teeth of a fossil ox, found in Texas. From the parts found, it is thought that the distance between the tips of the horns, in the living animal, could not have been less than eleven feet. In the Athæneum, Zanesville, O., there is a part of a skull and horns, said to have been found in Kentucky, which, from appearance, belonged to a larger animal, of the same species above mentioned. In an extract from a letter written by Chas. Lyell, it is shown beyond question, that the bones of the fossil animal which has been exhibited in New-York by Mr. Koch, under the name of Hydrarchos, were procured at several different places, and under such circumstances as to leave no doubt that they belonged to several distinct individuals.

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American Journal of Agriculture.—This work, the publication of which was for a while suspended at the close of the first year, has been resumed under the charge of Prof. E. Emmons and Mr. A. Osborn. We have received the first number of the new volume. It is handsomely printed, and contains 160 pages octavo. A well executed portrait of Gov. Wright, constitutes the frontispiece. A little more than one-half the matter is original; the remainder is chiefly extracts from other Journals. Among the original articles we were well pleased by the perusal of an able and sensible one on the "Theory of Agriculture," by Prof. Emmons.

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Lardner's Lectures.—We have received Part III, which treats of the Steam Engine in various forms. We consider these Lectures among the most valuable reading that has ever been offered to the American public. Published by Greely & M'Elrath, Tribune Building, New-York—price 25 cents per No.

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We have received the first number of a work, so novel in its character, that we are tempted for once to step out of our line of business, to notice it. It is the "American Phonographic Journal," to be published monthly by Andrews & Boyle, 337 Washington st., Boston. As we have no acquaintance with the science of which it is the organ, we can of course only speak of the mechanical execution of the work, which is certainly very creditable to the publishers. It is entirely engraved upon copper-plate, and though the characters look crabbed enough to the uninitiated, we doubt not they are "plain as preaching" to those who have looked into the matter.

We see that this improved system of writing has long attracted attention in Europe, and is slowly but surely finding students in this country. As we believe there is *something in it,* we invite the attention of those who are willing to examine a new thing with a candid and unprejudiced eye, to the subject. The price of the *Journal* is only $1 per annum.

AGRICULTURAL SOCIETIES.

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New-York State.—The meeting of the Executive Committee of the N. Y. State Ag. Society for this month, will be held at the *American Hotel* in Auburn, on Thursday the 14th inst. At this meeting, the appointments of Judges to award the Premiums at the Fair to be held at Auburn in September next, will be made. A full attendance of the members of the Ex. Committee, consisting of all the officers of the Society, is very desirable.

Saratoga County.—Fair to be held at Saratoga Springs, Oct. 21, 22.

Rensselaer Co.—Fair at Troy, Sept. 23, 24.

Allegany Co.—Officers elected at last annual meeting:—Laurens Hull, Angelica, President; Joel Karr and Bryce Kerr, V. Presidents; R. Church, Recording Sec., and A. B. Hull, Angelica, Cor. Secretary and Treasurer.

Seneca Co.—Fair to be held at Waterloo, Oct. 22, 23—John Delafield, Geneva, President, and J. W. Bacon, Waterloo, Rec. Secretary.

Suffolk Co.—Fair to be held at Comac, Oct. 1—J. L. Smith, President, and N. Smith, Sec., Smithtown.

Rutland Co., (Vt.)—This Society, which has been recently organized, has issued its Premium List for the present year, but the time and place of holding the Fair is not stated. Frederick Button, Clarendon, President; J. C. Thrall, Rutland, Rec. Secretary, and W. C. Kittredge, Fairhaven, Cor. Secretary.

Jefferson Co.—At the winter meeting, Geo. White of Rutland, was elected President; Edward S. Massey, Rec. Secretary, and J. C. Sterling, Watertown, Cor. Secretary. Receipts of the Society last year, $673.11. Payments, $497.36.

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Dutchess Co. Hort. Society.—This society, which was organized the past winter, has issued a liberal list of Premiums for early Fruits and Vegetables, to be awarded at an exhibition to be held at Poughkeepsie on the 18th and 19th of June. We cannot but hope that this society is destined to a better fate than has awaited all the Horticultural Societies, which have heretofore been organized in the Valley of the Hudson, with the exception of the one in Columbia county, which we believe has been eminently successful. Dutchess possesses many of the most highly improved gardens in the State, and they are owned by gentlemen whose liberality will not, we are confident, permit their Hort. Society to languish for want of funds. The great obstacle to the success of such associations, is, generally, the want of some individual to perform the labor necessary to give them vigor and usefulness. Men ought to (and no doubt will) be found in Dutchess county, who will devote the time and labor necessary to insure their society abundant success.

Madder.—In answer to an inquiry in our last No., Thos. Watson, Jr., of Torringford, Conn., informs us that he "can furnish several bushels of the *slips,* which are generally used for propagating it, if applied for soon. The time for planting is from the 1st to 20th May. About 10 bushels of the slips are necessary for an acre."

THE CULTIVATOR.

ALBANY, MAY, 1846.

TO CORRESPONDENTS.

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Communications received since our last, from Junius, A Subscriber, J. C. Adams, T. S. Meacham, Stephen Warren, Wm. Jennison, C. Ingalls, Will. H. Wills, Z. C. Robbins, F. A. Wier, J. E. Macomber, A Subscriber, John Shillaber, P. Barber, Robert White, Jr., A. Rose, T. Watson, Jr., L. B.

Books, Pamphlets, &c., have been received as follows:

Guenon's Treatise on Milch Cows—republished from the Farmers' Library. (See advertisement.) Greely & M'Elrath, publishers, New-York.

Address before the Albemarle (Va.) Ag. Society, by Franklin Minor.

Marl—a Letter addressed to the Ag. Society of Jefferson county, Georgia, by J. H. Hammond.

Descriptive Catalogue of articles for sale at the Agricultural Warehouse of A. B. Allen, New-York.

☞ We have received from W. S. Harding, of Franklin, Louisiana, a barrel of sugar of his own manufacture. It is an excellent sample, coarse grained, dry, and of good flavor.

MONTHLY NOTICES

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The Fruit Culturist.—For notices of this new and valuable work, see advertisement in this paper.

Temperance.—We have received from Mr. Cyrus Ingalls, New-Hartford, N. Y., a well-written article on the subject of temperance—a subject of great importance to farmers, as well as to all other citizens. But our paper is designed chiefly as a medium of communiation in relation to matters directly connected with agriculture, and we have generally so great a press of articles of this description, as to leave no room for others, however important or valuable in themselves considered.

Rust in Wheat.—Mr. Samuel Warring, of Morrisdale, Pa., supposes that a great cause of rust in wheat is the retention of too much water by the soil and subsoil. As a reason why some sections are more subject to rust now than formerly, he mentions that the roots of trees caused a natural drainage of the soil until, after several years, they entirely decomposed and the spaces they occupied, became filled with soil. A remedy for rust on such soils, would of course be draining and subsoiling. He advises sowing wheat on "narrow and round ridges with proper lateral water courses well cleared out with the spade."

Budding fruit trees.—Joshua H. Ordway, who received the first premium of the Essex Co. Ag. Society for the management of fruit-trees, says: "I practice shield or T budding, and put the bud on the south-west side of the teee, the rows running south-east; they are then not exposed to the sleet and snow of winter. I formerly lost many buds by inserting them on the 'back' side of the tree. Another advantage of putting the bud on the south, is the greater portion and quicker flow of sap on that side, as every one knows that a bud takes best where there is the most sun and sap. I learned some twenty years ago, to take out the wood from the bud, but soon gave up the practice, and should now as soon think of taking out the pith of a scion." In regard to *transplanting fruit-trees*, Mr. O. says he has had much the best success when removing them early in the spring. "Young trees set in the fall," he observes, "are liable to be thrown out by frost. And all, whether large or small, often suffer injury by having their roots severely frozen when the ground is bare during our severe winters."

The Horse Black-Hawk.—By reference to our advertising columns, it will be seen that this celebrated horse will stand this season at the stable of his owner, Mr. D. Hill, in Bridport, Vermont.

Rata Tree in New Zealand.—This is at first a parasite, which winds round and encircles large trees, and destroys them; its numerous coils joining and forming a hollow trunk, leaving the victim to rot inside. When full grown, it is the monarch of the New-Zealand forest. Its form is gnarled and contorted. It is of the myrtle tribe, and bears bright crimson blossoms in such abundance, that the whole tree is in a glow; and being abundantly intermingled through the forests, presents a magnificently variegated appearance.

Produce of Wheat.—On the 18th of August, 1805, Mr. Ch's. Miller, of Cambridge, Eng., took a plant of wheat which had been sown the beginning of June, and divided it into eighteen parts; each of which was transplanted separately. About the latter end of September they were again removed and divided into sixty-seven roots. In March following and the beginning of April, they were separated into 500 plants, which yielded 21,109 ears, containing 570,000 grains, measuring 3¾ pecks, and weighing 47 lbs.

FOREIGN.

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By the Caledonia, arrived at Boston on the 20th of April, we have English and Scotch papers to the 3d ult. There is a fair prospect that "Peel's new tariff" will pass the House of Commons—it has already passed a second reading. The markets are yet very dull—cotton has scarcely advanced at all—little is doing in flour—for Indian corn there is a moderate demand, though this article had a little declined at the latest dates. Trials have, however, been made of Indian corn-meal to a considerable extent, both in England and Ireland, and the result seems to indicate that the prejudice which has been entertained against it, will wear off when its value is known. There is not as much alarm, in relation to the scarcity of food for the lower classes, if we may judge from remarks in the papers, as has before prevailed. The prospect is good for agricultural products generally—wheat and grass very promising. The Agricultural Gazette of March 7th, says: "There is more food for stock at the present moment in many parts of the country, than there was four months earlier in the season at the corresponding period of last year." Speculation in regard to the origin of the potato disease, is as busy as ever, and without any more probability of arriving at any general conclusion.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, April 22, 1846.

COTTON—New Orleans per lb., 6¾a10c.—Florida, 6¼a9—Upland 6¼a9—Alabama, 6¼a9.

BUTTER—per lb 14a16c.

CHEESE—Per lb., 7a8c.

FLOUR—Genesee, per bbl, $5 50—Baltimore, Howard-street, $5.06a$5 12½—Richmond City Mills, $6.25.

GRAIN—Wheat, Genesee, per bushel, $1.25—Rye, 74a75c.—Corn, northern, 68a71—southern, 67—Barley, 62a65—Oats, northern, 44c

HEMP—Russia, clean per ton, $205a$210—American dew-rotted. $80a$100—water-rotted, $130a$180—Manilla $155.

HAMS—Smoked per lb.. 7½a9½ cts

BEEF—mess, per bbl., $7.50a$8.10—prime, $5.25a$5.50

LARD—6¾a7½c. per lb.

PORK—Mess, per bbl., $10.62a$11.12½.

TOBACCO—Kentucky, per lb., 3a7c.

WOOL—(Boston prices.) April 18:

Prime or Saxony fleeces, washed per lb.......	40a41	cts.
American full blood fleeces,..................	37a38	"
" three-fourths blood fleeces,..........	32a33	"
" half blood do	30a31	"
" one-fourth blood and common,.....	27a29	"

GUANO,

BY the ton or hundred, or in smaller quantities, at 23 Dean-st.
E. COMSTOCK & Co, Albany Ag. Warehouse.

PLOWS, CULTIVATORS, AND OTHER AGRICULTURAL IMPLEMENTS,

At Burlington, Vt.

THE subscriber has for sale at his warehouse, North Wharf, Burlington, a good assortment of plows, including the "Worcester plow," made by Ruggles, Nourse & Mason, Prouty's "Centre Draft" Plow, the "Diamond Plow," &c., &c., together with Cultivators, Seed-Sowers, Churns, Hoes, and other articles used by farmers. An arrangement has been made for a constant supply of the above and other articles. Farmers in want of good implements are invited to call or send their orders.

May 1. 1846. JOHN S. WARE.

"MANHATTAN AGRICULTURAL WAREHOUSE."

J. PLANT, No. 5 Burling Slip, New-York City.

ORDERS for the *genuine* "Warren Patent (latest) Improved Horse Powers and Threshers," promptly attended to by the sole proprietor, (J. Plant,) viz:

One Horse Power, alone—price,	$40 00
Two " " " "	50.00
Four, " " " "	75 00

One, two, and four horse Threshers—price $20, $25, and $30.
Liberal discount to dealers.
May 1—1t.

GENUINE MORGAN HORSES.

THE subscriber will offer for sale his stud of the choicest Morgan stock on advantageous terms, to those who may wish to grow profitable, enduring, high-priced horses, consisting of the following horses, viz: *Flint Morgan* and *Sherman Morgan, Jr.* Both were sired by old Sherman Morgan, the most distinguished horse of his times, and are not second as stock horses to any of this far famed race. Flint Morgan I bought of Jonas Flint, Esq., of St. Johnsbury, Caledonia county, Vt., and Sherman Morgan, Jr., I bought of John Buckminster, Esq., of Danville, Vt., there raised and known as the Blanchard colt, to which places persons are referred for their pedigrees and merits, as well as to testimonials in my possession; also to the counties of Strafford Canol, Belknap, N. H., where their stock is highly approved and extensively known. Also, four breeding mares of this inestimable blood, viz: Dolly, Kate, Fanny, and Adaline, and all of which were sired by old Sherman Morgan, and are believed in foal. Their blood, power, and appearance, together with their stock already produced, favorably recommend them as breeders. Also, colts and fillies of various ages, may be seen at the stable of the subscriber; all of which will be sold collectively or separately to suit applicants.

JOHN BELLOWS.

Lancaster, Coos Co., N. H., May 1, 1846—3t.

FRUIT TREES.

FOR sale, a collection of fine *Apple Trees*, comprising 50 choicest sorts; also upwards of 200 distinct varieties of *Pear Trees*; also *Cherries*, *Apricots*, and *Plums*.

When the order comprises 100 trees, the prices will be for apples, 15 cents; for pears on free stocks for standards, 30 cents; ditto on quince stocks for dwarfs, 20 cents. For any less number than 100 trees in an order—apples, 20 cents; pears, 37½ cents; do on quince, 25 cts.; apricots, 50 cts; plums, 37½; cherries, 37½ cents. Apply (*by letter post paid*) at the Fruit Plantation of Lloyd N. Rogers, near Baltimore, to THOS. TURNER, Manager.

April 1—2t.

NORMAN.

THIS celebrated horse will stand the ensuing season at the stable of JAMES RICK, in Germondville, three miles north of the Lansingurgh.

Norman is a beautiful dapple grey, 15½ hands high, strongly made and finely proportioned. He combines first rate trotting qualities and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom, and good temper.—are eagerly sought after in the market, and command prices ranging from $150 to $500.

The very high reputation of Norman's stock as "road horses," and the extraordinary prices they command, renders him by far the most profitable horse to breed from, of any in the country.

Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms.

TERMS.—$10 the season. Insurance to be agreed upon.

CALVIN MORSE.

Lansingburgh, May, 1846—1.

GARDEN SEEDS.

THE subscribers have now on hand a full stock of choice garden seeds, which can be furnished to dealers or to growers and gardeners in any quantity, either in small papers or in large packages. They would solicit especial attention to this branch of their establishment, as they mean at all times to be supplied with the choicest seeds to be had in this country or Europe.

E. COMSTOCK & Co.
Albany Agrl. Warehouse, No. 23 Dean-st.
March 1, 1846.

LEWIS' SEED PLANTER,

Manufactured by E. Comstock & Co., Albany Ag. Warehouse.

THE above drill with several valuable improvements, making it beyond all question the best in use, will be ready for delivery early in April. In this drill are combined the qualities of the ordinary machines, enabling it to plant all the small seeds, together with carrots, parsnips, beets, peas, corn, beans, cotton, hemp, and indeed nearly all crops grown in drills. It is simple, and not likely to require repairs for a great length of time. It may be drawn by a horse, or (as it runs easy,) may be operated by one man, or he may have the aid of a boy for using in a garden or for short rows. Retail price $12.00. To dealers a liberal discount will be made. E. COMSTOCK & Co.

April 1.

POUDRETTE.

THE Lodi Manufacturing Company have on hand freshly manufactured poudrette, of the first quality, for sale in the city of New-York, at the following prices, viz:

From one to six barrels, inclusive	$2.00	per barrel.
" seven and upwards,	1-75	"

delivered in New-York, free of cartage and other expense.

At the factory, on the Hackensack river, where vessels drawing eight feet of water may go, at the rate of $1.63 a barrel, or 35 cents per bushel.

This manure is not only the cheapest and best in use, but also is less dangerous to use than some others. Two barrels or eight bushels will manure an acre of corn. Instructions sent *gratis*, with pamphlet when required. Letters (post-paid) addressed to the Lodi Manufacturing Co., 51 Liberty-st., New-York, enclosing the money, will be immediately attended to, or it may be obtained by application at the office of the company. April 1—2t [2]

LANGDON'S HORSE-HOE OR CULTIVATOR PLOW.

THIS useful and highly valuable article may be had of E. Comstock & Co., at the Albany Ag. Warehouse, 23 Dean-st. Two sizes—one for $7, and the other for $6.

POUDRETTE—NEW-YORK COMPANY.

A SUPERIOR article of poudrette, prepared in the most careful manner, by the New-York Company, (the first established to prepare the article, in this country,) may be had on application, either by letter or personally, at the office, 23 Chambers-street, N. Y.

☞ It is hardly necessary to say that poudrette, as a manure, where transportation constitutes a part of the cost, will be found the cheapest, as *one bushel* of it, when properly prepared, will produce as much corn, or potatoes, or *any other kind of vegetation*, as *twelve or fourteen* bushels of farm-yard manure. This has been repeatedly tested in various parts of the country.

☞ Orders enclosing the money—two dollars a barrel for *six* barrels or under—and $1.75 per barrel for *seven* barrels and over. Letters should be addressed to D. K. MINOR, Agent,
April 1.—2t* 23 Chambers-st, New-York.

EAGLE PLOWS.

THE genuine Eagle Plow, made by Ruggles, Nourse & Mason, is for sale at the Albany Agricultural Warehouse. All sizes adapted to different soils and purposes. E. COMSTOCK & Co.

April 1.

FOR SALE.

A FULL blooded Narragansett, *entire* Horse. This breed has been in the family of the late Governor Jay, for the last century. They are *rackers*, and not *pacers*. He is the only *entire* horse of the breed which is left. He is very fast; will *rack* his mile within three minutes. Horses of this breed are highly esteemed as saddle horses for gentlemen and ladies, and bring a high price. Apply to JAMES R. DEY, No. 51 Liberty-st, N. York.

April 1—1t.

CENTER-DRAFT PLOWS.

THE subscribers keep for sale a full assortment of Prouty & Mears' Center Draft Plows, of all sizes and prices. Farmers in want of these plows will have them forwarded promptly by sending their orders to us. E. COMSTOCK & Co.,
April 1. Albany Ag. Warehouse, 23 Dean-st.

ALBANY AGRICULTURAL WAREHOUSE,

No. 23 Dean-Street.

THE subscribers ask the attention of farmers to their assortment of AGRICULTURAL IMPLEMENTS, FIELD and GARDEN SEEDS, embracing all the varieties needed for the farm or garden. Our articles have all been selected with the greatest care and attention, and with especial reference to their adaptation to *improved* agriculture. For notice of articles see separate advertisements in this paper. But as we cannot enumerate the articles, seeds, &c., here, we shall be happy to show them to all who may call at our warehouse. E. COMSTOCK & Co.
April 1. 23 Dean-st

FARMS FOR SALE.

I OFFER for sale cheap, two good farms, of 150 acres each, with dairy stock, &c. The one which I occupy is in Ellisburg, the other in Pamelia. Or I will exchange them for a good farm of equal value, in a good and healthy location, from 3 to 6 degrees further south, a milder climate being desirable.

DANIEL ROUNDS.

Ellisburgh, Jefferson Co., April 1, 1846.—2t*

McCORMICK'S REAPER.

BROCKPORT, March 20, 1846.

THE undersigned respectfully offers his PATENT REAPER to the farmers of New-York, and the Western States generally; and while he believes that no labor-saving machine has ever been introduced into public favor more cautiously, and at the same time with more general satisfaction to purchasers than his Reaper, he has the satisfaction of being able to present it for the harvest of 1846, in a greatly improved state. He can now warrant the raking of the wheat from the machine to be accomplished with ease and completeness, by a man comfortably *seated upon it*, whose position may be seen from the cut in another part of this paper. This improvement was thoroughly tested in the last harvest with the most signal success, and as is believed, perfects the "Reaper." An account of its operation on the estate of the late Gen. Mills, of Mount-Morris, by Samuel J. Mills, Esq., is hereto subjoined.

This machine unlike many of the improvements of the present age, is not now offered to the public either as an untried experiment, or only having been partially tested, and therefore not to be relied upon. It has been extensively and most successfully in use in Virginia, since the harvest of 1842, and during the last two years has been extensively introduced into most of the wheat growing States of the Union, completely silencing opposition. So wide has been its range of operations in the last harvest, that it would be impossible, in a publication of this description, to give all, or even very many of the numerous certificates that have been procured of its satisfactory performance. Hand Bills will be issued in the course of a few days, by Messrs. Backus, Fitch & Co. of Brockport, Monroe Co., containing not only a description of the Machine, but the most full and unequivocal testimony of its usefulness and value to the farmer, by numerous individuals of the very first respectability who have used it, and witnessed its operations. The terms on which this Machine may be had, and the guaranty that will be given on its side, should induce every farmer whose lands and crops suit its operation to *give it a trial*—as, should it prove equal to the guaranty, it will do more than pay for itself in the cutting a single harvest. Any person can make the calculation for himself. As improved, one man to rake, and a boy to drive the horses, will attend the Machine, instead of two full hands as before, and from two to three acres more in a day may be cut by the improved than by the old Machine, by means of the greater ease with which it is done, which makes a great difference in a single harvest of any extent—say $25 or $30.

The Reaper is warranted to cut from 15 to 20 acres a day—to save an average of a bushel of wheat to the acre that would be lost by ordinary cradling, to be durable, and not liable to get out of order, and the raking as stated above. Price $100, payable on delivery at Brockport, Monroe Co., New-York, or time shall be given for good paper, drawing interest.

The undersigned further proposes to send his reaper to any responsible farmer, (or farmers,) who may desire to make a trial of it alongside, and on the same terms of *any other*, to be purchased or refused, as decided on making such trial.

The undersigned, Patentee of the Machine, has contracted with Messrs. Backus, Fitch & Co., of this place, experienced, well known, and established manufacturers, for the making of a large number of Reapers for the ensuing harvest, to whom orders may be directed. Many orders have been already received from the west, as well as from the surrounding country; therefore any persons desirous of Machines would do well to make early application, as it is not probable that all demands can be supplied.

C. H. McCORMICK.

From the Mt. Morris, N. Y. Spectator.

Mr. Harding: Dear Sir—Having made a trial of Mr. Cyrus H. McCormick's Reaping Machine for cutting grain, I take pleasure in making a public statement of it agreeably to his wishes. Mr. McCormick, the inventor, introduced his Machine here from Virginia. He did not arrive with it until the season for cutting wheat had nearly passed—and consequently cut only about thirty acres for me. The ground was level, being on the Genesee Flats, though the surface was somewhat uneven, as it was a piece turned over last fall, when put into wheat, with a very heavy turf, and many of the sods still remaining on the top of the ground. But they seemed to form no impediment to its successful operation. The machine cut one piece of twenty-five acres in a little less than a day and a half, averaging about two acres per hour for the time it was in operation. The wheat cut, if well filled, would yield about thirty bushels to the acres. The grain was cut cleaner, and more even than could have been cut with the cradle or sickle. It is drawn by two horses with ease, and is attended by a man to rake, and a boy to ride and drive. The raker rides on a seat attached to the Machine, and takes the wheat off at the side in gavels, ready for binding. The Machine is simple in its construction. The knife has a sickle edge, and plays horizontally; and is represented to cut one hundred acres or more without sharpening. The reel gathers the wheat for cutting, and lops it over on the table for the raker. I design to use the Machine the next season. I have no doubt it would work well on up lands, where tolerably free from stumps and large stones.

A number of persons, who were present and witnessed its operation, uniformly, I believe, expressed much satisfaction.

An incident occurred which may not be out of place to mention. Two cradlers, hearing that a machine was in the lot for cutting wheat, never having seen one, and believing that they could cut faster and better than any live Machines, started with cradles in hand, with the determination (to use their own words) of "skunking it." As they reached the fence, in sight of the Machine, and saw the rapid pace with which it moved, they hid their cradles in the crook of the fence and sloped off.

Yours, &c. SAMUEL J. MILLS.

Mount-Morris, August 15, 1845.

Gen. Braxton's Certificate.

CHERICOKE, Va., Dec. 10, 1845.

Dear Sir—I have now used your Reaper four seasons, and have no reason to withdraw any thing I have said in its favor heretofore. It has fully met my most sanguine expectations, and I cannot think that any farmer, having once tried it, would ever again willingly go into harvest without one or more, as might be the size of his farm. I have never found any difficulty in keeping them in order; in fact, much less than with the cradles. Although the two that I have work remarkably well, as you think your late improvements have so materially benefitted the Reaper, I must request you to send me one for the next harvest.

am, very respectfully,
Your obedient servant,
CORBIN BRAXTON.

To Mr. C. H. McCormick.

Gen. Cocke's Certificate.

December 13, 1845.

I have used one of Mr. McCormick's Reapers, and am satisfied, experimentally, of its value as a labor-saving machine; and, furthermore, that it saves something like a seeding of the land, over and above the process of cradling—I have, therefore, ordered another upon the improved plan, at Mr. McCormick's recommendation.

JOHN H. COCKE.

CARLTON, Dec. 15, 1845.

Having now used McCormick's Reaper in three harvests, I willingly bear renewed testimony to its value. Under the belief that the late alternations in its construction, can scarcely fail of enhancing its utility and diminishing the labor of raking, I have engaged a new machine for the next harvest.

ALEX. RIVES, Brother of the Senator.

ELK HILL, Dec. 13, 1845.

Dear Sir—I cheerfully comply with your request to give you for publication, my opinion in regard to your Reaper. I do this the more readily, because I believe its introduction into general use would be a great public benefit.

In the commencement of the last harvest, I put two Reapers in operation in Elk Island in a field of 180 acres, at the same time I started 14 cradles in a highland field, at this place, of the same quantity of land. The reapers on the Island and the cradles on the hill finished their work at the expiration of six days. There was not an hour's difference. If the cradles had been on the Island, instead of the highland, I do not think they could have performed more than two-thirds of the work. On the low grounds, therefore, where the harvest is generally heavy, I consider the "Reaper" to be equal to 10 cradles. I found one cradle to be sufficient to open the way for the two Reapers. This, with the addition of the drivers, the rakers, and five pickers up, stationed around the field to each reaper, constituted a force of fifteen hands—not estimating the shockers. The 14 cradles on the hill were followed by an equal number of pickers up—making 28 hands. If my estimate of the comparative labor of cutting with thescythe on the highland and low-grounds be correct, it would have required 40 hands to cut and pick up the crop on the Island in the same time that the work was done by 15 hands with the reapers. I have not estimated the labor of the horses, which were changed three times a day, as, in the time of harvest, they would otherwise be idle. The labor of the hands, except that of the raker, is easier than in the harvest field where cradles are employed. And even the raker, when he becomes accustomed to the operation of the machine, and learns to be deliberate—waiting till the apron is pretty well filled with wheat before he rakes it out, finds this work very practicable. By changing places occasionally with the driver, the labor of both is comparatively easy.

The Reaper cutting across the beds on low grounds, does far better work than can be done by cradles. I never saw a low ground field cut so clean as that on the Island. There is far less loss, too, by scattering. The wheat being thrown in piles of three or four sheaves, there is a saving of one third of the number of pickers up. It has been customary to pay on this estate $200 harvest hire. In the last harvest, I paid only $30. Another item of expense, by no means inconsiderable, which is saved by the use of the reaper, is the feeding of a large number of hands. I have seen it stated that the actual saving in wheat, was half a bushel to the acre, and I should think it a moderate estimate.

The construction of the Reaper is simple. The knives did not require sharpening, just beginning to be rather dull at the close of the harvest. I think we saved more than the cost of the reapers, which are uninjured, except that the knives will require sharpening. We have besides two new knives to begin the next harvest, eachreaper having an extra knife.

I have confined my remarks to the operation of the Reaper on low-grounds; but from an experiment of a day's cutting they perform equally well on high land where the wheat is good, and the land free from stumps and stones.

I am so well satisfied of the utility of your reaper, that I shall want another on the other side of the river before the next harvest. I am, dear sir, very respectfully, yours, &c.,

To Mr. C. H. McCormick. P. HARRISON.

PATENT PREMIUM FAN-MILLS.

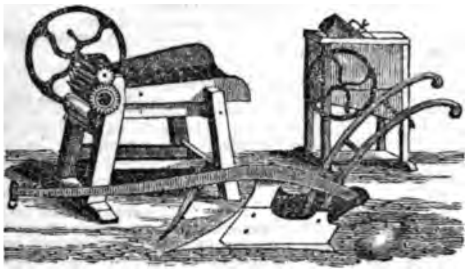
I. T. GRANT & Co., still continue to manufacture the celebrated Improved Patent Fan-Mills, at the old stand, Junction, Rens. Co., N. Y. These mills have taken the *first premium* at the following places:—New-York State Fair, at the Institute, New-York, the State Fair, at Pennsylvania, and the State Fair at Maryland. The subscribers have no hesitation in saying that these mills surpass anything of the kind ever offered in market. They are the only mill that has ever been produced that will chaff and screen wheat perfectly clean in one operation.

We also manufacture *Grain Cradles* of the very best quality, which have taken the first premium at the New-York State Fair. They are for sale at factory prices, at the following places:—

A. B. Allen's, 187 Water-st., New-York;
D. L. Clawson's, 191 " "
E. Comstock & Co.'s, Albany;
H. Warren's, Troy; and
Viall & Warren's, Mechanicsville, Saratoga Co., N. Y.

All orders thankfully received and punctually attended to. All goods delivered at Troy, N. Y., free of charge.

I. T. GRANT, &Co., Junction P. O., Rens. Co., N. Y.
Feb. 1—tf [2]



PROUTY & MEARS, BOSTON

CELEBRATED, highly approved, and unequ. ed CENTER DRAFT PREMIUM PLOWS—for sale at their *sole agents'*,

JOHN MAYHER & Co.'s

Agricultural Warehouse, 195 Front-st., near Fulton, New-York.

The subscribers have just received a large assortment of Prouty & Mear's celebrated and highly improved CENTER DRAFT PLOWS, which are in every way *superior to all others now in use*; and having been appointed sole agents for the sale of the same in the city of New-York, we invite the public to call and examine for themselves, as the above plows cannot be obtained at any other establishment in the city. Dealers and others in the country supplied on the most reasonable terms.

We also wish to inform merchants and farmers that we have constantly for sale plows of our own manufacture, and all others now in use.

The following is a list of prices of some of the plows manufactured by us.

A No. 1,	Worcester	patent,		$1 50
A " 2,	"	"		2 00
A " 3,	"	"		2 50
2 B	"	"		3 50
2 B	"	"	with colter,	4 00
Eagle, No.1,	"	"		4 50
" "	"	"	with colter,	5 00
" " 2,	"	"		5 00
" " 2,	"	"	with colter,	5 50
Meadow C	"	"		5 50
"	"	"	with colter,	6 50

Castings to fit the Worcester Ploughs, 3½ cents per pound.

We likewise have for sale the most extensive assortment of *Agricultural Implements* ever offered in this city, most of which are new and highly improved patterns, warranted to be made of the best materials, and of very superior finish, among which are the following:

Pitts' Corn and Cob Crusher,
Hussey's " "
Sinclair's " "
Hussey's Reaping Machine,
Bark Mills, 4 sizes,
Coffee " "
Corn Shellers of all kinds,
Horse Powers " "
Threshing Machines "
Subsoil Plows, of the most approved kinds,
Cultivators of the most approved kinds,
Sinclair's Stalk and Straw Cutter,
Hovey's " " "
Stevens' " " "
Greene's " " "
I. T. Grant & Co.'s Prem. Fan Mills,
Clinton's Prem. Fan-Mills,
Rice's " "
Holmes' " "
Store Trucks, Wheelbarrows,
Mule Waggons, &c.. &c.,

Langdon's much approved Cultivator Plows or Horse Hoe. All kinds of plow castings constantly on hand. All the above articles are offered for sale on the most reasonable terms. Castings of all kinds made to order.

JOHN MAYHER & Co.,
195 Front-st., N. Y.

N. B. *Beware of Imposition.* Any person offering plows for sale, and representing them to be of our manufacturing without the full name "J. MAYHER & Co.," on the mouldboard and beam of the plows, are guilty of a *false representation*, as no person in the city and county of New-York has the genuine article for sale [illegible]. Apr[illegible] J M & Co

FIELD-SEEDS AT THE ALBANY AGRICULTURAL WAREHOUSE.

300 BUSHELS BLACK SEA WHEAT, both red and white varieties.
200 bushels Italian wheat.
200 " Marrowfat Peas.
75 " Black-eyed Peas.
100 " Canada Peas,
15 " Emir or Skinless Barley.
150 " Four rowed Barley.
250 " Two rowed Barley, (an uncommonly fine sample.)

CORN.

"Large Dutton," 12 rowed;
"Improved Dutton," 12 rowed, raised by S. W. Jewett, Vt.;
Long 8 rowed yellow;
Madawasca or early Canada
White Flint, (long ears,)
Small White Flint.

CARROT.

100 lbs. Large white;
150 " Long Orange.

TURNEPS.

350 lbs. Ruta-baga or Swedish;
100 " Large English Norfolk;
100 " White flat, or winter.

GRASS SEEDS.

Timothy, best quality,
Northern Red Top,
Large Northern Clover,
Lucerne or French Clover.
Orchard Grass,
Southern Red Top,
Western Medium Clover,
White Dutch Clover.

All the above may be had of best quality, at the Albany Agricultural Warehouse and Seed Store, 23 Dean-st.

March 1. E. COMSTOCK & Co.

AGRICULTURAL WAREHOUSE,

By Ezra Whitman, Jr., 55 Light-street, Baltimore.

THE proprietor of this establishment is the sole agent in Baltimore and vicinity, for the sale of the following *new* and valuable improvements, viz:

Whitman's improved Rail-way Horse-Power and Threshing Machine, which threshes and cleans the grain at one operation.

Prouty and Mears' Centre Draft Plow.

" Hovey's Premium Straw Cutter.

I. T. Grant & Co.'s Premium Fan-Mill.

Douglass' Premium Pumps, which are so constructed as to prevent freezing in the coldest of weather.

Rogers' Mill, for cutting and grinding corn stalks.

Together with a general assortment of the *latest* and most *approved* agricultural implements, constantly on hand, and manufactured to order.

EZRA WHITMAN.
Baltimore, Nov. 14, 1845.

BURRALL'S CORN SHELLER.

THE subscribers are now fully supplied with this valuable Sheller so as to be in readiness hereafter to fill orders for any number, without delay. A further trial during the last month has fully established the superiority of this over all other Shellers for hand power. For description, engraving, &c., see Cultivator for February, page 60. Retail price $10, with a liberal discount at wholesale.

E. COMSTOCK & Co.
Albany Agrl. Warehouse.
March 1st, 1846.

VALUABLE FARM AND COUNTRY SEAT FOR SALE.

THE subscriber offers for sale the Farm on which he now resides, situate in Southwick, Hampden county, Mass. The road from Hartford to Northampton, via Westfield, along which a mail coach passes daily, and nearly through the centre of the Farm, which contains about 400 acres, nearly half of which is wood land, heavily timbered. It is bounded on one side by the Farmington canal, which renders the communication with New-Haven, an excellent wood market, easy and expeditious. The buildings are a mansion house, with a wing, the latter new making a front of 70 feet. Also a house for a tenant; three large barns, nearly new, covered with pine and painted; a corn house, carriage house, sheds, &c. Great pains have been taken in selecting and cultivating choice fruit, and there is now on the Farm, in full bearing, a great abundance of the best varieties of apples, cherries, peaches, &c. A part of the land is of superior quality, and on almost every lot is living water.

Tariffville, a larg manufacturing village, seven miles distant, affords a ready market for wood and every kind of produce, raised on a farm. This is one of the most valuable and desirable locations in the country, not only for farming purposes, but for the gentleman of leisure. A large portion of the purchase money, if desired, can remain for a term of years. I will sell the whole together, or in two parts. Letters of inquiry addressed to me, will receive prompt attention, or inquiry can be made of LUTHER TUCKER, Albany, or of R. SHURTLEFF, Springfield.

ROGER S. MOORE.
Southwick, March 1, 1846.—3t

THE "TELEGRAPH PLOW," a light and beautiful plow for cross-plowing, &c., as well as for green sward. A supply always on hand at the Albany Ag. Warehouse.

April 1 E. COMSTOCK & Co.

TREATISE ON MILCH COWS.

PUBLISHED on the first day of April, 1846, a Treatise on Milch Cows, whereby the quality and quantity of milk which any cow will give may be accurately determined by observing Natural Marks or External Indications alone; the length of time she will continue to give Milk, &c., &c. By M. FRANCIS GUENON, of Liborne, France. Translated for the Farmers' Library, from the French, by N. P. TRIST, Esq, late U. S. Consul at Havana, with Introductory Remarks and Observations on the

COW AND THE DAIRY,

by JOHN S. SKINNER, Editor of the Farmers' Library, illustrated with numerous engravings.

☞ Price for single copies, neatly done up in paper covers, 37½ cents. Full bound in cloth and lettered, 62½ cents. The usual discount to Booksellers, Agents, Country Merchants, and Peddlers.

Farmers throughout the United States may receive the work through the mails. The postage on each copy will be about 7 cents. By remitting $2, free of postage, we will send *seven copies* of the work done up in paper covers.

Country merchants visiting any of the cities can procure the work from Booksellers for those who may wish to obtain it. Please send on your orders. Address

GREELEY & McELRATH, Publishers,
April 1—3t Tribune Buildings, New-York.

ROCHESTER SEED STORE AND WAREHOUSE FOR FARMING TOOLS,

Nearly opposite the Market, Front-st., Rochester, N. Y.,

BY JAMES P. FOGG.

THE co-partnership heretofore existing under the firm of B. F. Smith & Co., was dissolved on the first day of January, 1846. The subscriber having purchased the interest of Mr. Smith, will continue the business as heretofore, on his own account.

The subscriber is well aware of the important relation which the seedsman holds to the whole farming community, and that upon his honor and veracity the crop and profit of a season in some measure depend. The greatest care has been used in selecting the seeds offered at this establishment for the ensuing year, and they can be relied upon as pure and genuine, carefully selected and raised from the very best varieties, and properly cured. Many kinds were raised in the immediate vicinity of this city, by Mr. C. F. Crosman, and under the inspection of the proprietor; others were raised by experienced growers; while those varieties of foreign growth, which experience has shown are the best, such as Cabbage, Cauliflowers, Brocoli, all the varieties of Garden and Field Turnep, Scarlet Short-Top Raddish, Scarlet and White Turnep Raddish, Dwarf and Early Peas, with twenty choice varieties of FLOWER SEEDS, have been imported by the subscriber from the long established house of R. WRENCH & SONS, of London.

FIELD SEEDS.

Red and White Clover, Timothy, Barley, Seed-Corn, Italian and Siberian Spring Wheat, Early June Potatoes, Marrowfat and other Field Peas, Rye-Grass, Orchard-Grass, Lucerne, &c., &c.

VEGETABLE GARDEN SEEDS.

A choice and select variety of Peas, Beans, Cabbage, Cauliflower, Celery, Beets, Cucumbers, Melons, Raddish, Squash, Herb-seeds, &c.

FLOWER SEEDS.

The collection of Annual aod Perennial Flower Seeds, contains many new and choice varieties.

AGRICULTURAL AND HORTICULTURAL TOOLS.

At the Ware-Room, adjoining the Seed Store, may be found an extensive and complete assortment of Agricultural and Horticultural Implements, embracing almost every tool used in the cultivation of the Farm and Garden.

SUPERIOR PLOWS.

The celebrated Massachusetts Plows, of three sizes. Several hundred of these Plows, have been sold in Rochester, and vicinity, and have given entire satisfaction. Also, Delano's Diamond plow, Subsoil and Side-hill Plows—The Gang-Plows—Two Horse Cultivators, for working summer-fallows, and getting in wheat. Corn Cultivators, Root-Cutters, Corn-Planters, Drill-Barrows, Hoes, Shovels, Scythes and Snaths, Garden-Rakes, Corn-Shellers, Straw-Cutters, &c., &c. JAMES P. FOGG,

of the late firm, and successor to B. F. Smith & Co.

Agents for the sale of Rochester Seeds by the pound, &c.

Buffalo, W. & G. Bryant—Batavia, L. Seaver—Lockport, L. H. Marks & Co.—Albion, Nicholson & Paine—Brockport, A. B. Bennett—LeRoy, Tompkins & Morgan—Scottsville, Garbutt & Co—Mount Morris, R. Sleeper—Dansville, H. B. Williams & Son—Geneseo, L. Turner—Canandaigua, L. C. Cheney & Co.—Palmyra, Hoyt & May—Oswego, C. & E. Canfield—Geneva, Hemiup & Cone—Waterloo, T. McClintock—Auburn, Wm. Hughes—Syracuse, Foster & Nott—Utica, J. E. Warner & Co.,—Homer, Wm. Sherman & Son—Amsterdam, J. W. Sturtevant—Schenectady, D. L. Powell—Troy, J. Daggett & Co.—Ballston, E W. Lee—Lansingburg, R. Harrison—Pittsfield, Mass., Isaac C. Cole—Springfield, Benj. R. Blight—Westfield, Jessup & Co.—Hudson, W. & G. Storrs.

Rochester, April 1, 1846—2t.

PLOWS.

FOR list of Plows for sale at the ALBANY AG. WAREHOUSE, 23 Dean-st., see Cultivator for Feb., 1846, page 72. Agricultural Implements of all kinds, for sale at the same place.

March 1, 1846. E. COMSTOCK & Co.

DURHAM BULL FOR SALE.

THE subscriber (not having sufficient use for him,) offers for sale his imported, thorough bred Durham Bull, "Prince Albert,"

He is five years old—a roan, of medium size —quiet in temper, and easily managed. For a portrait and description of this bull, see the August number of the Cultivator, and for his pedigree see the British Herd Book, vol. IV., page 382. His sire was the celebrated bull, "Sir Thomas Fairfax."

If not previously sold, he will be will be offered for sale at the next show of the New-York State Agricultural Society.

Letters on the subject may be addressed to the subscriber at Red Hook, Dutchess county, N. Y., where the bull can be seen.

Jan. 1, 1846.—tf ROBERT DONALDSON.

---

100 DOZEN CAST STEEL HOES.

THE subscribers have on hand an elegant assortment of Cast Steel Hoes, highly polished, and finished in the best manner. Among them 50 dozen made by Henry Tower, of Milbury, Mass., of four or five different numbers and prices. Also several other kinds of neck and eye hoes. Merchants and others dealing in hoes are invited to examine them. E. COMSTOCK & Co.

Albany Ag. Warehouse, March 1, 1846.

DUTCHESS AGRICULTURAL INSTITUTE.

THE summer session of this institution commences the first week in April, under direction of the subscriber, at the *Wilkinson Premium Farm*, in the Western Valley of Union Vale, 12 miles east of Poughkeepsie.

The course of studies in this institution is such as to give every facility for acquiring a most thorough knowledge of scientific and practical agriculture, with the use of the best modern improved implements. Instruction in physics, with lectures on those natural sciences requisite to constitute a perfect agricultural education, will be under the care of teachers amply qualified, and of tried experience. A select *Farmer's Library* with numerous agricultural papers and periodicals is also provided for the general benefit. The labor performed by the students is under the immediate supervision of the principal who superintends all farm operations.

A course of lectures will be delivered on each of the Domestic Animals, commencing with the Horse, during which a perfect skeleton will be at hand.

The farm contains 220 acres of land, embracing a great variety of soil. The location is pleasant and healthful. The buildings are extensive and commodious, for such an institution; the house 106 by 30 feet.

A conveyance runs regularly to and from Poughkeepsie, on Wednesdays and Saturdays, for the mail and passengers, and the general convenience of the institution.

Students attend church at such places as their parents or guardians may direct.

Students received during the whole season of farm work, the year reckoning in each case from the day of arrival. No student received for less than one year. Fee for the year $200, which includes tuition, board, with beds and bedding, washing, and ordinary mending, fuel and lights.

This Institution is under the patronage of the American Agricultural Association, the Farmers' Club of the American Institute, and the Agricultural Society of Dutchess.

For further particulars address the Principal and Director of Farm operations, Poughkeepsie Post Office, Dutchess County, New-York. JOHN WILKINSON.

REFERENCES.

Board of American Institute;
Board of the American Agricultural Association;
Rev. L. M. Vincent, New-York;
John L. Mason, Esq., " "
Prof. Cyrns Mason, " "
John Van Wyck, New Hamburg, Dutchess County;
Rev. Abraham Polhemus, Hopewell, "
Charles Bartlett, A. M., Principal Collegiate School Poughkeepsie;
Rev. H. G. Ludlow, Poughkeepsie;
Gen. Thos. L. Davies, President of the Bank of Po'keepsie;
Wm. A. Davies, Esq., Pres. of Farmers' and Manuf's Bank;
Henry S. Richards, Esq, Poughkeepsie;
Rev. S. Mandeville, La Grange.

April 1—2t.

THE MARYLAND AGRICULTURAL IMPLEMENT MANUFACTURING Co., BALTIMORE.

ROBERT SINCLAIR, Jr. & Co., Proprietors.

AT this manufactory is already on hand and for sale—the Maryland *Self Sharpening Plows*, warranted the most perfect in the United States.

Corn and Cob Crushers, Corn Mills,
Endless Chain and Leaver Horse Powers,
Threshing Machines, Corn Shellers,

for hand and horse power.

Cylindrical and Common Straw Cutters.

Also every variety of Cultivating and Sod Plows, Cultivators, Harrows and Farming Tools generally. In store

Field and Garden Seeds,

warranted fresh and first quality.

☞ Implement and Seed Catalogues furnished on demand, with prices and description of machines, seeds, trees, &c,

S. & Co.

March 1, 1846.—March and May.

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☞ ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.

ALBANY AGRICULTURAL WAREHOUSE.

THE stock of seeds and implements is now very full, and orders can be filled at short notice. We have a fine assortment of "Worcester," "Centre Draft," and Diamond plows, of all sizes, both with and without trimmings. Also Cultivators, Seed Planters, &c., &c., together with a general assortment of all the tools used by farmers. Large additions have recently been made to our stock of implements, and still larger additions are daily expected. We hardly think it necessary to enumerate the articles, as we can furnish nearly every article wanted on the farm.

We have also a very good and extensive assortment of Field and Garden Seeds, which will be sold in any quantity desired. Also Carrot, Turnep, and Beet seeds, for field culture.

Grass Seeds, such as White and Red Clover, Lucerne, or French Clover, Orchard Grass, Italian and Peruvian Rye Grass, Northern and Southern Red Top, &c , &c. A little Black Sea and Italian Spring Wheat for seed, still on hand.

E. COMSTOCK & Co., 23 Dean-st.

May 1, 1846.

FOR SALE AT D. O. PROUTY'S AGRICULTURAL IMPLEMENT WAREHOUSE.

194½ *Market-street, Philadelphia.*

EVERY variety of Agricultural and Horticultural Implements in general use, of the most approved patterns and superior workmanship, at extremely low prices A full supply of Prouty & Mears' Centre Draft, Self-Sharpening, Right and Left Hand, Sub-Soil and Side Hill, Wheel and Swing Plows, with points and shares so strong and thoroughly purified and hardened, that one hundred acres of land have often been plowed with a single set, at an expense of 50 to 62 cents. These plows are constructed of the best materials and the highest finish, and for ease of draught and management, the facility with which their points and shares are turned and sharpened their eradication of weeds and thorough cultivation of the soil, they stand unrivalled in the market. They are warranted to work in any soil, and to give perfect satisfaction after fair trial, or they may be returned, when the purchase money will be refunded.

***Agricultural, Horticultural,* and *Flower Seeds* in great variety, raised expressly for this establishment by careful and experienced seed growers, and warranted.**

May 1—2t.

JUST PUBLISHED—PRICE 50 CENTS.

THE FRUIT CULTURIST, containing Directions for Raising Young Trees in the Nursery, and for the Management of the Orchard and Garden. By J. J. Thomas. Illustrated with numerous engravings.

For sale, wholesale and retail, at the office of "The Cultivator," Albany, and by M. H. NEWMAN,
Bookseller, 199 Broadway, New-York.

Notices of the Fruit Culturist.

"This is a very valuable work. It contains full directions for the cultivation of all the varieties of fruit grown in this country, and will be an invaluable aid to the orchardist and gardener."—*Roch. Dem.*

"This is a new and valuable work just issued from the New-York press, by our fellow-citizen, John J. Thomas, of Macedon. It is a convenient manual for the orchardist and fruit gardener, being adapted to the climate of the northern states, and should be in the hands of every man interested in these subjects."—*Wayne Sentinel.*

"We hail with real pleasure the appearance of this little work. It is a book "for the million," and just what is wanted by the multitude of persons who have a desire to cultivate fine fruits, and feel the need of knowledge on the subject, but cannot well afford to purchase Downing's admirable book."—*Ohio Cult.*

"We have glanced hastily over it, and find it exactly what we expected—a plain, practical little book, well calculated to effect the designs of the author, as stated in the preface, viz: "To furnish useful directions to those who may be little acquainted with the management of fruit trees, promote the culture of the best varieties, and improve their treatment so as to secure excellence and productiveness in a more eminent degree than is usually attained."

* * * This is decidedly *the* book for the "ten hundred thousand" fruit growers in the northern states. Every man and woman who cultivates to the number of *one* tree should have it, and have it immediately, It will save an immense deal of trouble in asking questions of persons who are perhaps too busy, or ill qualified, to answer them. To the multitudes of persons of *all* professions, and of *no* profession, who are here and there embarking in the nursery business, without the least knowledge of the matter, it is invaluable. We hope it will be placed in every school district library in the state. It is well adapted to promote taste and knowledge among the young."—*Genesee Farmer.*

"From a hasty perusal we believe it eminently calculated to benefit the horticulturist."—*N. E. Farmer.*

PLATT'S PATENT (LATEST) IMPROVED PORTABLE BURR-STONE MILLS.

THE undersigned would refer readers to his advertisement in the April number of the Cultivator, in regard to these mills—and he would here add that it is his intention to inform the public practically (as soon as suitable arrangements can be established in this city,) of what has been proved to his own and others' satisfaction, that these mills now stand *unrivalled* for excellence. If certificates from distinguished parties are valued, they can be given; here is one.

"This is to certify that I have recently used 'Platt's Patent Portable 24 inch Burr-Stone Mills,' in this city, for grinding feed and coarse and fine meal. It proves to be by far the best I have ever known, having ground with it from four to five bushels of fine corn meal per hour, *in the best manner* with power not exceeding two horse. MARTIN CONE.

New-York, March, 1846—4t.
For sale by J. PLANT, 5 Burling Slip, New-York.
May 1—1t.

UNITED STATES AGRICULTURAL WAREHOUSE,

191 *Front-street (up stairs,) New-York.*

THE subscribers having in connection with their manufactory opened a warehouse as above, respectfully solicit the attention of farmers and dealers in agricultural implements, who will find it to their interest to call and examine before purchasing, our extensive assortment of PLOWS, of the most approved patterns, made up in the best manner, and of superior materials, with castings for the various plows in use. Also

Straw Cutters,
Fan Mills,
Corn Shellers,
Corn and Cob Crushers,
Corn Mills,
Horse Powers,
Threshers,
Harrows,
Cultivators,
Road Scrapers,
Ox Yokes and Bows,
Forks, Rakes,
Hoes,
Scythes, Snathes,
Shovels, Spades,
Churns, Wheelbarrows,
Whiffletrees,
Neck Yokes,
Ox and Trace chains, &c., &c., &c.

With an assortment of Trucks, Sugar-mills, Mill Gearing, Segments, &c., all of which are offered for sale at the lowest prices, and warranted to be as represented.

TRIMBLE & WATERMAN,
U. S Ag. Warehouse, 190 Front-st, (up stairs,) N. Y
Manufactory 509 and 504 W[illegible]
May 1 [illegible]

MORGAN HORSE BLACK-HAWK.

THIS superior horse will stand for mares at the stable of David Hill, in Bridport, Vt. For particulars in regard to Black-Hawk, see last vol. of the Cultivator, pages 184, [illegible]

May 1, 1846.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

Vol. III. ALBANY, JUNE, 1846. No. 6.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

Seven copies for $5—Fifteen copies for $10.00—all payment to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

☞ "The Cultivator" is subject to newspaper postage only. ☜

MR. HORSFORD'S LETTERS.—NO. XI.

……

MANAGEMENT OF FORESTS IN GERMANY.

……

Giessen, Aug. 14, 1845.

Mr. Tucker—I have just returned from a long walk with the University Professor of Forest Science. Our course lay through an interesting section of the ten thousand morgens under his direction, and enabled me to gather from what I saw and from his conversation, many facts in the range of forest culture in Germany, that I am confident your readers will not be unwilling to share with me.

The present system of forest regulation, in its detail, was instituted in 1818. Previous to that period the woodlands were planted, trained and cut for timber, without particular scientific direction. Naturally enough, there were many instances of exception to the best modes, in the growth, preservation, and removal of wood. The government saw clearly that in a century or two, at the farthest, Hessia would be robbed of its forest, and in great wisdom took the entire control of the woodlands into its own hands. Now each town and village has its specific amount of wood provided each year, and at the lowest price consistent with the expenditures necessary to the well-being of the forest-lands. The Mayor and Burgomasters receive so many cords from the forest director—each town and village an amount proportioned to its population.

At the commencement of this system the people thought the act oppressive, but now the re-institution of the old arrangement would be regarded as a great misfortune.

The whole is managed with an economy that would, to most Americans, to whom wood has as yet comparatively little value, seem quite uncalled for. But it is not so. The *saving* of the German peasantry has quite as important a relation to their happiness as their accumulation.

The planting of seeds, propagation, transplanting, trimming and constant attendance upon the trees till fit for cutting, and the conversion of stems, branches, and roots into firewood, is every part of it, under the most intelligent direction; and some of your readers will be surprised, as I was, to learn that the course of study which young men must pursue to fit them for the posts of forest director under government, is as long and difficult as that of medicine. Even this does not give a just idea. For example: A student who has attended two full courses of medical lectures, in the state of New-York, having previously and in current time studied three years with a practising physician, is upon examination, admitted to the privileges and emoluments of a medical man. Here, he must not only have heard the courses of lectures, but he must have studied chemistry in the laboratory, conducting a systematic course of analytical chemistry. He must have studied pharmacy with an apothecary, making his preparations; he must have presented his collections in botany, (and these, with an acquaintance of mine, who hopes to win the degree of Dr. at the close of the current year, comprise about 5000 species;) in anatomy he must have used the scalpel—and all this is superadded to the course of the Gymnasium.*

The student of Forest Science must, after a course of thorough natural history—including botany, zoology, mineralogy, and geology—add a thorough and somewhat extended course of mathematics and physics. Of chemistry less is requisite than for the medical student. The examination is so thorough that there is no hope of passing without an intimate acquaintance with the several departments of science particularly belonging to the profession. Mathematics in its higher principle of the calculus, is called in to determine from accumulated data concerning the nutritive inorganic matters of the soil, and the rapidity of growth of different woods, &c.; how much wood can be profitably cut each year; and how soon tracts will be cut away; how long forests may advantageously be permitted to stand in particular places, &c.

Physics come in to aid in the drainage, road and hedge-making, surveying, &c. Botany and entomology are too obviously all essential, and scarcely less so are geology and mineralogy.

In passing through the superb gardens we saw quantities of fine beets, mangel-wurzel, cabbage, carrots, &c. The kitchen gardens certainly promise rich treats for the table in the coming fall and winter.

The chief labor in them, as in most other kinds of service, is performed by females. The freedom from weeds and the thrifty condition of all the vegetables, particularly attracted my attention.

Farther on we passed fields of rye, cut and shocked a fortnight or more since, and wheat just being cut. The latter is light, not more than twelve bushels to the acre. It is cut while the straw is yet tough, and the berry still soft, with a short, abruptly curved sickle, which is used, not as with us, aided by the left hand, but as a hatchet would be. The gavels with the mass of little parasitical vines about the straw, are afterwards bound up with rye straw bands at a lavish expenditure of time. The noxious Canada thistles, which are every where about Giessen, are separated from the gavels previous to binding. The rainy weather of the last fortnight or more, has proved the advantage of the careful shocking over all the grain fields. In drawing the wheat to the barns, a sheet of linen is tacked to the sides and bottom of the wagon rack. This, with the cutting before complete ripeness prevents quite all loss.

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* The gymnasium corresponds pretty nearly with our colleges. Students complete their courses of mathematics and the classics in them.

Already the rye fields are plowed and dragged for the fall crop. Flint, red-chaff, bearded, and another variety, of very large berry, I have noticed among the sorts of wheat. Potatoes are looking finely. They are generally in drills, not more than a foot and a half apart. New potatoes are in market.

We came first among the forests upon a section of eight years old larches. They were not more than three and a half feet high. Where any had died others of three years growth had taken their places. In a little marsh of only a rod square, the Prof. showed me, how, after years of failures to make larches grow, he had succeeded by inverting a spade-full of earth and sward upon the level surface, thus making a little hillock, and there planting the young larch. Throughout a distance of some miles, where formerly the road was about four rods wide, there are now on each side, regular rows of larches, firs, and pines, occupying nearly the half of the former width. The macadam road renders the original width unnecessary, and properly now it is appropriated to an increase of forest supplies.

The whole tract of the forest land belonging to the Giessen circuit, is cut into blocks about a quarter of a mile square, by roads of from twelve to twenty feet wide. These serve in the removal of wood, and divide the different growths and sorts from each other. This remark in general is true, though the kind of timber is varied in hills and in moist lands, irrespective of any thing else than the soil and situation. Every spot where plants could, and apparently should grow, there they were seen. Sometimes in quincunx order and sometimes from broadcast sowing. The latter method is now esteemed the better one, the plants being permitted to grow altogether fifteen or twenty years. At the end of this time the straightest and best remain, while the indifferent are removed, always careful however to keep the ground thoroughly shaded.

The nursery of forest trees was especially grateful to my eye. Here the varieties were grown less for transplantation to sites in forest lands, than as ornamental and shade trees. Many trees of other countries are here. An oak from Austria—another from America—as well as maples and pines from various lands. Above all the native and foreign trees in grace and beauty stood our New England elm. I could easily have fancied myself in a nursery by Pittsfield or New-Haven. It sells here as an ornamental tree at a good price. Varieties of ash, locust, maple, beech, thorn hedges, cherry, apple, and pears, were separated from each other in beds, and the whole kept freed from weeds by the labor of the peasant girls.

Upon the southern exposure of a grove of beeches, we saw the effect of direct sunlight upon trees that in earlier life had been protected by shade. A strip of bark several inches wide had sprung from the wood, and through a number of square yards about the roots, the grass by reflected sunlight had been most manifestly injured.

A singular trait of character in the deer which are encouraged to roam about here in considerable numbers, was pointed out to me. When the season arrives in which the bucks begin to rub their horns, they seek young, slender trees, and rub and twist them about till much of the bark is removed. What is particularly singular, is that they fall upon the saplings of foreign trees, as if couscious the tree would be destroyed, they would spare the native growth.

The muck that accumulates in the little ravines is gathered, much of it, and sold.* My attention was directed to a pile recently purchased by Professor Liebig. It is to be incorporated with the soil of a little farm called the Liebig Heights, commanding a fine view of Giessen and its surrounding points. Near this little farm the forest director is now laying out a network of walks through a grove of several hundred acres of pines. The expenditures are made by the city—a tribute of respect to the genius whose fame has made this little town known through the world. There can be no objection to my mentioning here, that the government of Hessia pay all the expenses of postage, and all the cost of transport of matters connected with chemistry that would otherwise fall upon Prof. Liebig.

To return. When the trees are from twelve to twenty years old, the trimming commences and employs hundreds of the peasantry when other labor is less pressing. The branches and twigs are cut and made into bundles for fifty-four kreutzers per hundred—about eighteen cents a hundred. They are chiefly consumed, I think, by the bakers. The trunks and larger branches are saved instead of being chopped, and, as already intimated, the stumps and roots are thoroughly dug up, dried, and sold. So economically managed are the expenditures of the laboratory, in order that the sums paid by students may be the least possible, that one of the apartments is warmed by the burning of little pine roots.

I have given you but a hasty outline of what I saw and learned, and yet imperfect as it is, it may give some idea of an art which we may one day be obliged to prosecute in the new world. The necessity of such rigid economy in the consumption of our forests has not been felt by us. When it shall be, it will be fortunate that so safe and complete a guide has been furnished us in the experience of the Germans.

Respectfully yours, E. N. Horsford.

MANURES.

......

L. Tucker, Esq.—It is a principle now universally conceded, we believe, by all good farmers, that continual croppings, however favorable circumstances may be, must continually impoverish the soil, and that in the end, blank sterility will take the place of abundant fertility unless returns are made to it, in some degree commensurate to the amount of production taken from it. This principle is in perfect accordance to the universal laws of nature. Stop the flow of the streams which supply the fountains and let the outlet continue its draughts, and the fountain will soon become dry. Let an animal accustomed to labor, continue to perform his task, and although you may give him food sufficient for his subsistence in a state of inactivity, yet, if he continues to labor, and an additional quantity of food is not placed at his disposal, you will find his strength wasting, and his beauty and symmetry of form shrinking into contracted dimensions. So with the earth; let it labor and bring forth ever so abundantly of herb for use of man, and grass for his herds and flocks, and if this produce, the results of labor, be taken from it, and no equivalent returned, deformity and decay of its productive powers will be the sure result of such gross mismanagement.

Now every body knows that this restoring principle is found in manures or fertilizing substances which come within the reach of the farmer in various ways, and under different names, according as their different characters and qualities may dictate. Hence in lime, gypsum, salt, &c., we have mineral manures; clover, leaves from the forest, corn-stalks, furnish vegetable manures, and so on, through the whole vocabulary. The action of these different substances must of course be different, yet, their end is the same, to give fertility to soil exhausted by cropping, or as we would rather take business by the the foretop and say, to prevent exhaustion.

It was our design when we commenced this article to write more particularly at this time on the management and application of vegetable and animal substances, useful in improving the soil. And we have no doubt but *every body* will respond to the assertion, that the more of these a farmer can bestow upon his lands, the greater will be the produce of his harvests, and the more farmer-like the look of his establishment. Then we take it for granted that every one will acknowledge the *necessity* of increasing these substances to the greatest amount, and applying them in the most judicious and economical manner.

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* Some of it is employed to enrich the earth about the roots of trees when transplanted.

According to our views of this matter then, the farmer's barn-yard must be the "savings bank" where all the deposits are to be gathered to effect this object. And in order to have every thing safe, about the vault, the yard should have a firm bottom and be raised at the sides so that all the liquids as well as the solids may be safe from embezzlement. Some recommend paving the basin of the yard in order to prevent leakage. We have found a very good substitute for this in spreading an even surface of "hard pan" or subsoil (a substance not unfrequently found within reach of the plow, on exhausted lands.) Into this repository it is no matter how much litter is thrown during the winter, when it is continually subject to the trampling of stock, and it is of very little consequence how coarse it is, provided it is of a consistency to absorb the juices of the yard. The refuse of corn-stalks, potato and pumpkin vines, indeed anything and everything which is capable of absorbing moisture may be deposited here with assurances of a speedy and profitable dividend.

We have now got our materials together, for everything must imply the whole, and what is to be done next? On this point there is yet a diversity of opinion. Some would say, let the heterogeneous mass remain over summer, and in autumn cart it off to the corn-field for next year. Others, perhaps would think it altogether advisable to reduce its quantity by some *artificial process*, and make of it *rich rotten* manure, fit for corn the present season. Either of these ways may do for those who have enough and *to spare*, but the farmer of limited means cannot, and the one of strict economy will not submit to the "*falling of stocks*" which must be consequent in either case.

We believe that it is now conceded by most farmers, that the farm-yard should be cleared as early as may be every spring, and that its contents be applied directly to the soil. Yet we know there are some, so much devoted to "ancient usages" and so bound in the opinions of their fathers as to suppose that corn cannot be raised on many soils without pursuing the wasteful practice of letting their manure lie over the year preceding, and the tedious operation of applying it by shovels-full under the hill. This process, if the land is previously in tolerable tilth, will certainly give a fair crop. And why should it not? Did the provident farmer who adopts this course ever reflect that the shovel-full so applied would have been three or four shovels-full if used in its fresh or unfermented state. Now let careful experiment decide this question. Make an estimate of the number of loads of fermented manure necessary to manure an acre of corn in the hill. Then make your own estimate of the number of loads of green manure necessary to make those loads rotted manure, and apply them to the adjoining acre, and see, not only where you get the best crop of corn, but the best succession of crops, for in making agricultural estimates, the account should always run beyond the present year. If you find the balance in favor of using green manure and spreading upon the land, then you gain one year in the use of it, a period of no small importance in improving a farm. And the advantage to the present crop, where manure is spread upon the land instead of applied in the hill, is greater than at first imagined. In the latter case its effects are earlier felt we admit, and they are sooner over, for however rapid the growth of corn may be, while the roots come within its immediate influence, it is checked as soon as they push into the unmanured land beyond; while in the former case, they, by pushing forward, are meeting new supplies as their increasing growth requires them. So then, we say, use barn-yard and stable manure in as green or unfermented a condition as possible. It is the *fermenting process* that is needed in the soil, and it is by this that like leaven it diffuses itself through the mass "until the whole is leaven," or fertilized. We care not how coarse the material be if it has only laid in the yard until it has absorbed its fill of the juices, for the coarser, the longer its effects will be visible. It will keep the soil if inclined to clay, loose or permeable to the sun and atmosphere longer, and if it is sand or gravelly land, it is much less subject to evaporation, and goes to form vegetable mold, which renders it more tenacious. Hence the benefits of plowing in green crops on such lands. They furnish a fertilizing medium which is not soon lost by air, and winds, and rain.

In the application of barn-yard manures in an unfermented state we should be guided by circumstances. If very coarse, we would by all means plow them in, as in that case, the harrow could not cover them sufficiently to prevent evaporation, and therefore loss, which should be carefully guarded against, would follow. But where but little coarse material is combined, thorough harrowing may be sufficient.

With regard to the application of manure to spring grains, such as wheat, &c., we have of late years taken the loosest litter in the barn-yard, and spread it after the last harrowing, with good effect, though it may seem like a contradiction of the doctrine we have advanced. But there are attending circumstances which alter cases between plowed and hoed crops. It is usually a long time before the latter cover the land so as to obstruct the operation of winds and sunshine. In the case of wheat, it soon starts up and covers the surface so that in a little time it protects the litter, through which it sprung, from too rapid evaporation. This litter in its turn, extends acts of courtesy to the grain, by keeping the earth cooler and in a more equal state of moisture through its growth. It also prevents its being beat down into solid masses, by heavy rains, and thus preserves to it a readier fitness for atmospheric influence.

Yours truly, W. BACON.

Richmond, (Mass.,) Feb. 16, 1846.

EXPERIMENTS IN THE CULTURE OF POTATOES.

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L. TUCKER, ESQ.—Time was, as aged people have told me, when a barrel of potatoes was considered a sufficient winter's supply for any family. From such a small beginning it has become one of the most important crops of our country, and its importance should enlist the feelings of all farmers to make every possible exertion to increase the crop without extra labor. There is a great difference in people in regard to the amount of seed necessary to be used in planting, and in regard to cutting, &c. Some farmers plant their potatoes whole, and use from 20 to 30 bushels on an acre; some plant only the seed end, thereby saving one-half or more; while others pursue different methods. I never knew an individual, however, who only planted a part of the potato, that did not plant the seed end. In my opinion, it is desirable that experiments should be made extensively, to ascertain, if possible, the exact amount of seed necessary—if it should be cut—and if so, to ascertain that part of the potato which is best for planting.

I send you the following account, hoping others, that have never done so, will be induced to make experiments with the potato, (and a great variety can be made,) believing the result will be beneficial.

In years past, we have cut our seed potatoes, using those of middling size, and put the seed ends of two in a hill. In 1843 and '44, we planted a few rows with the rest, cutting the seed so as to have only one eye in a piece, and put three pieces in a hill. At harvesting it took two or three more hills for a bushel, where only three eyes were put in a hill, than where the seed ends were; but the potatoes were larger and fairer, with but few that were too small for the table, while of the others, probably a fifth part were too small. The hills might be planted nearer together of the three eyes in a hill, thereby making the product of an acre greater than of the other method.

This year we tried a new experiment. Took potatoes about the size of a hen's egg; cut them, leaving about a third or more of the potatoe on the seed end, and planted two rows, putting two seed ends in a hill in one row, and two *other* ends in a hill in the other row. The rows were treated and cultivated exactly alike throughout, but owing partly to the drouth the yield was not large. In the row in which the seed ends were planted, it took 40 hills to make a bushel;

in the other only 29, being one-fourth difference in the yield.

In the first experiment, it will be seen there was a saving of seed, in the second an increase of the crop.

East Ware, N. H., Dec., 1845. EATON.

FACILITIES FOR WOOL-GROWING IN ILLINOIS.

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MR. EDITOR—Turning over files of your most valuable paper, my attention was drawn to "Notes of a Traveller—No. 1," contained in your number for May, 1845, signed by S. B. Buckley, which have much merit. The portion of the communication I would allude to and remark upon, is as follows:—"If we look at the history of sheep, we will find that they have always flourished best in hilly and mountainous districts; therefore it is not probable that the wool-growing business will be profitable on the western prairies, because there is too much sameness in the scenery, and often the want of pure water and air; besides during the summer season, the prairies are often parched by drouth when the grass becomes dry, affording little nutriment, and then it stands ready to be, and is sometimes consumed by fire. At such seasons every one knows that sheep would not have sufficiency of shade, food, and water. I allude more particularly to the middle and southern portions of Illinois, and I speak from impressions made in a tour through that region in the dry summer of 1838."

Now although the gentleman is guarded, and intends *only* to convey the ideas and opinions formed by him during a tour over part of southern and middle Illinois, yet as some of your numerous readers, perhaps, may, without further inquiry receive the above views as applicable to the *whole* of Illinois, and parts adjacent, I will attempt a limited description of parts of northern Illinois, (which I regret Mr. Buckley did not also visit,) at the same time hoping you may find room for my communication in your pages.

There is as marked a difference in the surface—its altitude, variation, beauty of scenery, &c., between the parts of Illinois Mr. B. alludes to, and the north-western section, as the contrast Holland displays with the choicest parts of England—say Gloucestershire. Northwestern Illinois has none of the sameness alluded to, except perhaps in spots of limited extent. The surface generally is high rolling prairie—with ravines, bluffs—and though *not* mountainous, comes within the term hilly—for, from points, one may catch a view of 10 or 25 miles of surrounding country, although *that* does not lie low; a flat of over 10 or 20 acres is rare, and the whole country is admirably drained, as was proved in that unprecedented wet season of 1844, the effect of which mainly was only to reduce the quantity of the crops about one third. There were no overflowings in this favored region, sweeping away fencing, stock, houses, and people, as elsewhere, nor were the roads impeded to the extent of retarding travelling.

The summer of 1845 was unusually dry; from May to winter there were but two or three slight showers of an hour or two. Yet the crops did not suffer—the grass continued good though not quite of usual height, and hay made of it has proved most excellent in flavor and nutriment. I made and stacked over 350 tons of this hay, and so good is it, that my eastern horses prefer it to timothy. Much certainly depends on making it at the right time and in the right manner.

With reference to the *air* of this country—its purity, freshness, elasticity, and freedom from sultriness is what first attracted my attention when travelling in northwestern Illinois, during the summer of 1843, after having visited and resided in the choicest parts of Europe and Asia, and several of the islands of the east. I have never felt a climate more delicious, exhilarating and healthy, than in this valley of Rock River, nor have I viewed scenery more attractive for beauty and variety, though more wild and grand I have certainly seen.

Sheep do thrive well, excellently well here, as others and myself have proved, and the cost of keeping is little, about 40 cents per head per annum, including shepherd, interest on capital, and every other charge. On my farm are about 1100, and it would afford me pleasure to show them to Mr. Buckley and all other persons who take interest in rural affairs, feeling assured, as I do, their condition would convince the most skeptical that there is no section of the United States where the animal thrives better in *every* respect, especially for wool and breeding. My flock has been fed mainly on prairie hay during the past winter, and with very little grain, not a quarter part of the quantity stated to be fed to flocks in New-York, Ohio, &c.

The dryness of our winters and clear cold weather, is favorable to sheep. The rainy days here being less by about one-half than in New-England and New-York. I have proved this truth, and in summer, it is rarely the sun rises without a breeze coming with it, continuing into evening or night. I have never known a real sultry day here.

Those who have doubts of this section of the west being favorable for sheep or other stock, and who seek *choice* spots for farming with unusual advantages, on a large or small scale—especially the former—I invite to call upon me, and proffer my services, vehicles, and horses to show them around—pointing out the slopes, gentle and abrupt—the bluffs and ravines—hill and dale and richest bottoms, on all which sheep delight to walk and pick the green food they are most fond of—near which are springs and creeks of pure water that never fail—also groves and openings of ancient timber ranging up to the most elevated points—choice sheltering places for the animals, from summer's sun and winter blasts.

There is no richer land or more easily worked else where. Such is the soil generally. Yet upon the range of a large farm may be found spots of 10, 20, or 40 acres of three or four kinds of soil—clayey loam—sandy mixture, &c.

It is true that generally, Illinois, is not so fully timbered or well watered as some other sections of our country, and the remark will apply to the favorite range I allude to. Yet there are spots that have all of wood and water that is desirable, with other adequate combinations in soil, surface, elevation, &c., &c.,—therefore, in contrast, are the more valuable.

I own a tract, rather extensive that has those combinations—land, and timber, and water, &c., sufficient for several large farms, which I would sell, or join persons with *means* and cultivate farms on joint account. These lie near the farm I am carrying on, of which, over 600 acres are fenced, with other improvements in proportion—also stocked. It commands over 10,000 acres of richest prairie, therefore adequate to keeping any desirable number of cattle, sheep, &c. I should be glad to meet a person of *means* to take one-fourth or two-fifths of this farm, who would engage to reside upon and look after it part of the time, that I may feel at liberty to travel.

With reference to Mr. Buckley's remark that "prairies are often parched by drouth, &c., I would state that so far as I have seen or heard, *our* prairies are *not more* liable to be parched than the fields of grass in any other section of the United States; and as for burning, I believe it impossible, until severe frosts have nipped the grass in latter autumn or winter. Here prairie fires are not fearful events, but otherwise, for what with roads, improvements, &c., our property is not jeopardized by them. And although I have *read* of these fires sweeping over the earth with a rapidity that cannot be escaped, even by a race horse, I have never seen the flames at a speed that I could not easily outrun, without the aid of horse. The fact is the grass here is seldom over 16 or 18 inches high. But where there are fires, as described, that surpass the deer in speed, the grass, cane, and weeds, reach to four, five, and six feet in height. Burning the dry grass has a beneficial effect on the succeeding crops of grass, especially in bringing it forward earlier and sweeter.

Permit me to state a few facts that contrast greatly with the *doings* of those who clear a farm in a country heavily timbered.

I bought my farm in April, 1844, and with the exception of about 25 acres that were broken up, all was as it came from the hand of nature, (very beautiful and rich certainly.) Before the end of September, the *same* year, I had sowed 176 acres of wheat, and about 20 of rye—and had broken for spring crops about sixty acres more, which was duly seeded the following spring. From the 176 acres I harvested last July rather over 3200 bushels of wheat—very superior in quality, and weighing 63 lbs. per bushel. This crop of wheat cost me a fraction under 24 cents per bushel delivered in my granaries, (not including the expense of breaking up the land,) *every* expense included, say labor, seed, threshing, teaming, interest on the value of the land and improvements, &c., &c. This result on *sod*,—next season I expect as is usual, a considerable increase of grain per acre, which, of course, will reduce the average cost per bushel in a ratio.

The breaking up, and seeding down, *including seed*, thorough harrowing, &c., &c., cost me exactly \$3¾ per acre. What does it cost per acre to clear timber land, leaving the stumps in the ground? and how many years must elapse ere 100 acres are thus *half* cleared. Here the comparative ease and economy with which prairie land may be worked—probably at less than half the labor or cost of the clearings—and it will do good service much longer without manure!

I should have stated above, that I harvested most of my wheat with Hussey's excellent machine, which, with four horses, cut about twenty acres per day perfectly, not leaving a straw. With this I employed ten men—eight binding and two on the machine, one driving and one raking off. I recommend *that* machine to all who have large fields to harvest.

The entries of land in this district, during the last current year, nearly doubles the number of acres of the previous year, and I believe all by actual settlers.

Dixon, Ill., April 9, 1846. JOHN SHILLABER.

ON THE USE OF LEACHED ASHES.

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MR. EDITOR—I have just received your April number of the Cultivator, in which you wish, for the benefit of one of your correspondents, H. C. B., some information on the value of ashes, &c., &c., and call upon "chemists to tell." Not being exactly a chemist myself, yet having *dug* into the science a little, for the purpose of assisting me in my farming operations, I will offer a few remarks:—

Wood ashes, as you observe, generally do best on rather light soils: if they are applied in large quantities, either leached or unleached, they have a tendency to bring in the red moss, but upon gravelly soils this may not be detrimental, as they are usually dry and warm enough if there is moss. But upon more moist and close soils, ashes may ultimately prove injurious.

Unleached ashes when first applied to grass, or other crops, are much more efficient than leached, owing to the much greater amount of alkali, or potash they contain, but I do not think the sowing of unleached ashes upon land the most economical way of using them. If a heavy rain immediately follows, the potash is mostly washed out and carried off the land, or sinks into the soil beyond the reach of the roots of plants. Common potash is very readily dissolved in about its weight of water. If a farmer wishes to apply unleached ashes to his grass or grain crops, it would be the better way to mix his ashes quite moist with ground gypsum, and let them remain for sometime in the heap. The potash of the ashes would decompose the gypsum and sulphate of potash would be formed. Sulphate of potash is much less soluble than carbonate of potash, as it requires sixteen pounds of water (at the temperature of 60 degrees) to dissolve one pound of sulphate of potash. From this fact, the loss of potash by rains would be likely to be much less, and for clover, cabbages, turneps, radishes, the sulphate is decidedly better than the carbonate of potash.

But I think it a much more economical plan to mix ashes with swamp muck, peat or decaying vegetable matter from the woods. All these substances are acid; (decomposing vegetable matters always produce acids.) These acids want neutralizing before the muck, &c., are suitable manures for most crops, (sorrel excepted.) Frequently swamp muck is saturated with sulphate of iron, or alumina, that has oozed out in the water from higher land. In such cases, the ashes will have the direct effect to neutralize the acidity of the muck, and make it a good manure.

Leached ashes are highly valued by the farmers upon Long Island, but I suspect that most that are used there are from the soap-boilers, and I think they are better for agricultural purposes than the leached ashes from the potash or pearlash factory. In leaching ashes for making soap, generally, there is about one peck of lime used to each bushel of ashes; but there is very little, if any lime, with the leached ashes from the potash.

There is, after the usual process of leaching ashes for soap or potash, a certain quantity of potash left in the ashes, in combination with silex. Dr. Dana says, there are 50 lbs. of potash in a cord of leached ashes. Exposure to the air decomposes this, and then another portion of alkali can be extracted by water. This partially explains what you have heard of the Long Island farmers, who "consider the leached as good as the unleached ashes, provided they are not used for sometime after being leached." And you farther say, "some suppose they attract valuable properties from the atmosphere after coming from the leach-tub. Is it so? and if any, what are the propertses acquired?" In answer to your question, I say yes, it is so, and will explain it.

If a quantity of leached ashes are piled up under cover of a shed exposed to the air, another portion of alkali will be set free by the decomposition of the silex, as before stated, and the alkali has a strong affinity for nitric acid. The air we breathe is mostly composed of nitrogen, 79 parts, and 21 parts of oxygen; in these proportions, these two gases are mechanically combined. But by well known chemical laws, these two gases chemically combine in several different proportions, and form very different substances from common air. In one of their chemical combinations, they unite in the proportions of 14 parts nitrogen and 40 parts oxygen, and in these proportions it is called nitric acid, and mixed with a certain quantity of water it becomes *hydro*-nitric acid, or aquafortis. If common pot or pearlash is dissolved in diluted aquafortis, and the liquid evaporated, the result will be nitre, or saltpetre. But this is an artificial way of making saltpetre—and expensive too.

Nature takes a somewhat different method. As before stated, the alkali in the leached ashes has a strong affinity for nitric acid, and so strong is that affinity or attraction, that the nitrogen and oxygen of the atmosphere, will *very accommodatingly* chemically combine in the *right* proportions to form nitric acid, which readily unites with the alkali, and forms nitre or saltpetre—naturally, and cheap too. The longer the ashes are kept, and occasionally moistened and shovelled over, the greater the accumulation of nitre. But if the ashes are occasionally wet with urine, drainings from the manure heap, or mixed with night-soil, or decaying animal matter—substances all rich in nitrogen—the process will be much hastened, and the accumulation of nitre much greater in a given time. Perhaps twelve months would be a proper time for the ashes to remain.

A similar process is going on under all houses and other buildings; the potash in the felspar and mica of our soils, is being slowly but continually dissolving, and as there is also a continual ascent of water, by evaporation, each particle of water as it ascends brings with it its particle of potash, which is returned in the dry surface soil, which combines with the nitric acid. And there are frequently large accumulations of nitre under old buildings. In some parts of the East Indies, where it seldom or never rains, nitre accumulates (as under buildings here,) in such quantities that the soil is shovelled up and leached, as we do ashes, and boiled down to nitre. Nitrate of lime is formed in vast quantities in the lime caverns of Kentucky. And the dry-plains in the province of Arica, in Peru, are covered with an incrustation of nitrate of soda.

Every body knows, or ought to know, that saltpetre is a good manure—though perhaps they do not all know why it is so. Possibly I may continue the subject, but my sheet is full at this time. L. B.

Warner, N. H., April 20, 1846.

NOTES OF A BOTANICAL TOUR—NO V.

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Mr. Tucker—I spent three days collecting specimens in the vicinity of Painted Rock, and then went to the Warm Springs, six miles distant, in the famed county of Buncombe, in North Carolina. These springs were formerly much resorted to by the Southern Planters during the summer months, but latterly, owing to the facilities of travelling, many travel almost continually without incurring much if any greater expense than they would by spending weeks in succession, and perhaps months, at the springs. However, the Warm Springs have many attractions. They are in a beautiful mountain valley formed by the French Broad river, and surrounded by fine scenery. The buildings are spacious—the bath is delightful. A bathing house divides the largest spring, for the accommodation of both ladies and gentlemen where a person can indulge in swimming in water about four feet deep. The water is so strong that it will float the body with little effort. Its temperature was 94 degrees Far. Nor does it vary much throughout the year. The springs are near the edge of the river, and the one used for drink is overflowed by the river at high water. In this last were great numbers of a small shell, (*Physa aurea.*) A few miles beyond the Springs, on the road to Ashville, I stopped at Col. Chunn's, who was absent—his lady and a hired girl being the only white persons about the house. The road still wound along the French Broad, whose rapid stream was ever in view, forcing its boisterous course among the rocks, with high mountains on each side. This road belongs to a corporation and has several gates. It is a great thoroughfare, being the route pursued by most travellers and drovers passing from Tennessee into North Carolina. The droves of horses, mules, cattle, and hogs, are from Kentucky and Tennessee, for the South Carolina market. Staid all night at Col. Chunn's, and next morning crossed the river and ascended a small stream two or three miles, where I found *Berberis canadensis*, (Barbery,) Pursh, which is certainly very distinct from *Berberis vulgaris*, a native of Europe, now so common in New-England as to lead many to suppose that it is indigenous. Pursh's Barberry differs from the *B. vulgaris*, in its smaller and narrower leaves, and also in the size and form of its fruit and flowers. The former is a native of the mountainous parts of the southern states, and of rare occurrence, as it has been collected by few botanists since the time of Pursh, whose specimens are still in the herbarium of the late Prof. Barton, of Philadelphia. I have been thus particular because the two plants have been sometimes confounded; and Downing, in his Fruits and Fruit Trees of America, p. 160, says that they are scarcely distinct. On the 12th of May arrived at Ashville, intending to visit Mt. Pisgah, a high, conical mountain in full view, about twelve miles distant, overtopping its neighbors. I was told that the season was not far enough advanced to bring vegetation forward on the high mountains; and as I wished to see the Table mountain of South Carolina, it would be best to proceed there immediately—explore the mountains farther south, and return to Pisgah at a more advanced season. The climate of this region is not much, if any, warmer than that of Western New-York. During the summer of 1842, the thermometer ranged generally from 70 to 85 degrees, in the valleys, while on the mountains it was frequently about 60 degrees, and sometimes much lower. The guide who accompanied me to the summit of the Roan, a high mountain in Yancy county, said that he had been on the top of that mountain the 22d of June, when a storm arose and covered [illegible] with snow. On the table lands of these mountains, the inhabitants often do not raise corn enough for their own consumption, on account of the frost; the principal crops being oats, buckwheat, and potatoes, with an abundance of cattle and hogs, rarely a little wheat which is raised sufficient for home consumption in the adjacent plains. On a small farm in the vicinity of the Roan mountain, I was told that they had been subject to frost every month in the year. When I left the southern portion of Alabama, it was the middle of March, the woods were green, with their full expanded leaves; in about a week I had reached the elevated region south of Huntsville, in the northern part of the State, where the leaves had not yet attained half their usual size. From the 1st to the 10th of April, in middle Tennessee, the leaves were nearly full grown and the inhabitants were busy in planting corn; but at the middle of April, for thirty miles on the table land of the Cumberland mountains, the trees had just begun to put forth their leaves, and the ground was white in the morning with a severe frost.

On descending into the plains of East Tennessee, the country was green with verdure, and the farmers were there also busy in planting corn, and now, the middle of May, among the mountains of North Carolina, I found myself where vegetation had scarcely clothed the plains and woods with green while the leaves of the high mountain trees were about half grown. I should also remark that the spring of 1842 was from two weeks to a month earlier than usual. S. B. Buckley.

West Dresden, Yates Co., N. Y., 1846.

CONNECTION OF CHEMISTRY WITH AGRICULTURE

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Mr. Tucker—I have several times carefully read over Mr. Horsford's article on the analysis of red clover, in your May number, and I agree with you, that most of the inferences deducible from the results there given, are in perfect agreement with the teachings of experience. I have long known the superior value of well-made clover hay—especially for feeding milch cows and fatting animals; but in regard to the original principle which constitutes that value, Mr. Horsford has furnished me some new ideas. Following out the suggestion of Liebig,—that carbon, in the form of sugar, starch, and gum, when taken as food by the animal, is converted into fat,—Mr. Horsford shows that the value of clover consists mainly in the large proportion of starch or sugar it contains, and which is capable of conversion into carbonic acid. Thus the superior value of clover cut when the heads were fully developed, over that cut before the heads were formed, is shown by the former having yielded on fermentation nearly fifty per cent. more carbonic acid than the latter. "The larger per cent. of carbonic acid," says Mr. H., "corresponds to the larger per cent. of sugar." Here, then, we have an explanation of a known fact, viz., that there is more value in clover as food for stock, when it has reached its full growth, but is not ripe, than when it is in a more immature state. All may have noticed the sweetness of clover heads while in bloom. To secure the greatest quantity of this saccharine matter, should be the object of the farmer; and Mr. Horsford shows that by cutting the plant when the heads are fully formed, but not ripe, the sugar by proper drying may be secured. "The water," he observes, "will evaporate, leaving the sweetness with the vegetable fibre and other organic matters, to be fed to stock."

Mr. Horsford's hints in regard to the proper method of curing clover, are worthy attention. For instance, he shows that green clover contains 83.5 per cent of water, and from this draws the natural inference that, if it be taken to the stack or mow with this weight of water, a fermentation will follow which will destroy the sugar by converting it into vinegar—"souring the whole mass and rendering it unpalatable for stock." But if it be properly dried the sugar "will remain with the vegetable fibre and go to nourish the stock. Again, the heads and leaves are shown to be, as every practical man knows they are, the most valuable parts of the clover plant; hence the mode of curing should be such as will prevent these from falling off and being wasted. Thus curing it in cocks as is now practised in this country to some extent, is proved to be the best.

The conclusions above given, as well as the results of Mr. Horsford's analysis generally, when brought to the test of practice, are found to be correct; and we may hope that a *proper* application of chemical science to agriculture, will in other cases alike harmonize with established facts.

Are there not, however, certain positions assumed by some chemists which are either at variance with known facts, or are at least difficult to be reconciled with them? I would cast no unreasonable distrust on the theories which have been given to the world through the medium of scientific chemical investigation. Some new and important truths have doubtless been discovered, and when we consider the comparative infancy of the science, it is perhaps reasonable to expect in future greater perfection in its practice and a corresponding correctness in regard to results and conclusions.

Chemists usually divide the substances used as food for animals, into nitrogenized and non-nitrogenized—the former are considered the special elements of nutrition, the latter only the elements of respiration. Liebig's arrangement of these substances is as follows:—

Elements of nutrition.

Vegetable fibrine,
Vegetable albumen,
Vegetable caseine,
Animal flesh,
Animal blood.

Elements of respiration.

Fat,
Starch,
Gum,
Cane sugar,
Grape sugar,
Pectine,
Bassorine,
Wine,
Beer,
Spirits,
Sugar of milk,

Liebig thinks that substances of the former class only are capable of forming or supporting the organized tissues. He says—" The former are capable of conversion into blood, the latter incapable of this transformation. * * * Out of those substances which are adapted to the formation of the blood, are formed all the organized tissues."[*]

Now the question is, do practical results, in all respects agree with this arrangement and these conclusions? Let us see. It is admitted that all bodily exertion produces a greater or less waste of muscular tissue. Liebig says—" the slightest motion of a finger consumes force," and " that in consequence of the force expended, a corresponding portion of muscle diminishes in volume."[†] But the principal point of the first enquiry, is, whether muscular strength and the waste of muscular tissue are supported and supplied by food in the ratio of the nitrogenous matter which the food yields on analysis?

Fat, it will be seen, is reckoned among the substances wholly destitute of nitrogen; according to Liebig's theory it contains no nutriment, and is incapable of supporting muscular action. If this is admitted, how shall we account for the superior value which fat meat is known to possess as food for the laboring man? The English or Irish laborer, whose food sometimes consists in a great degree of vegetables, such as potatoes, turneps, and cabbages, finds his ability to perform labor or sustain muscular exertion greatly increased if he can contrive to add to his vegetable diet a quantity of clear fat pork or mutton, lard, or the suet of beef or mutton.

Chemists inform us that the proportion of nitrogen in the vegtables above named, is very small—amounting in potatoes, which contain most, to only *thirty-six hundredths of a pound* in one hundred pounds[‡]—and we know that the laborer cannot long sustain himself on these articles alone; yet by the aid of animal fat,—which it is said contains, not only *less* nutriment than the vegetables, but absolutely *none at all*, he is enabled to continue his labors, comparatively without fatigue!

The eastern and Canadian lumbermen, in securing their winter's stock of provisions to take to the woods, procure the fattest meat which can be had, to eat with their bread and potatoes. Fishermen, and indeed the laboring men generally in the New-England and Northern states, procure the fattest pork, which they prefer to any other kind of meat—especially as experience has proved its superior adaptation to sustaining the body.

Indian corn does not contain a large proportion of nitrogen. According to the late analysis of Dr. Playfair, its proportion of protein, or nitrogenous matter, in 100 parts is 7—giving less of what chemists call nutriment, than wheat, barley, or oats; yet the savage with his horn of bear's oil, and pouch of parched corn, takes the most laborious exercise—fearlessly enters on war-expeditions against his enemies, where success depends greatly on muscular strength and power of endurance.

Mr. Schoolcraft, in his late Report on the Iroquois, (page 150,) informs us that the Indians sometimes took with them on their former journeys, meal of parched corn and sugar derived from the sap of the maple; and he states that only one table-spoonful of this meal mixed with sugar and water, would sustain a warrior for twenty-four hours without other food. And yet, as we have seen, Indian corn is not very rich in nitrogen, and sugar, according to Liebig, is wholly destitute of nutriment, though he believes it may form fat.

Again, in regard to the results of feeding swine with nitrogenized and non-nitrogenized food, Liebig asserts.

" A pig, when fed with highly nitrogenized food, becomes full of flesh; when fed with potatoes, (starch,) it acquires little flesh but a thick layer of fat."[*]

On this subject we have a case exactly " in point " in swine fed on the offal of slaughter-houses. The offal of these establishments does not consist of fat, (for that is too valuable to give to hogs,) nor scarcely in any degree of substances of which fat, according to Liebig's theory, could be formed—it is chiefly blood, membrane, and tendon. But do the facts furnished by this example sustain the conclusion that "swine fed on highly nitrogenized food " become particularly "*full of flesh?*" In the pork so produced, does the fat bear any less proportion to the lean than in hogs fattened in the ordinary manner? The common opinion on this subject is known to be directly the reverse of Liebig's; viz., that instead of such pork being more hard and " full of flesh," it is more soft and oily than the common kind. I have conversed with butchers who have killed and sold in market many hogs fattened on slaughter-house offal, and they unhesitatingly state that the proportion of fat is as great, and that of lean, not greater than in hogs fattened on vegetable food.

The idea is held by some that wild animals, especially the carnivora, have no fat;[†] yet it is known that bears often acquire a degree of fatness scarcely surpassed even by the hog. They have been killed in their dens after a hybernation of five months, when the carcases have been found covered with a layer of fat of from one to two inches or more in thickness, and the kidneys also completely covered with it.

Somewhat of connection with the point here under consideration, Liebig remarks that—" in the entire class of carnivora, the food of which contains no substance devoid of nitrogen except fat, the production of fat in the body is utterly insignificant;" but he supposes that " even in these animals, as in dogs and cats, it increases as soon as they live on a mixed diet;" and that " we can increase the formation of fat in other domestic animals at pleasure, but only by means of food containing no nitrogen."

In reference to this it may be said that a considerable accumulation of fat in dogs is not unusual, even in those fed mostly on animal food. Indeed, butchers' dogs, which live on this kind of food, are generally fattest. The writer has known at least one dog of most extraordinary size and fatness, whose food for years was almost entirely blood, which he lapped as it gushed warm

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[*] Liebig's Animal Chemistry, p. 35. [†] Animal Chemistry, p. 68. [‡] Boussingault.

[*] Animal Chemistry, page 32.

[†] Animal Chemistry, page 31.—" The flesh of wild animals is devoid of fat."

from the throats of slaughtered animals. It is true that this dog had been subjected to emasculation; but this operation, though it might change the secretions of the system, could not affect the constituents of the food, or cause it to produce any results in the animal but those in accordance with natural principles.

A late number of the *Rochester American* contains a communication signed A. Wheeler and S. Johnson, stating that a dog owned by Dr. L. Ballard, of Le Roy, had lately been slaughtered by Capt. Blood, a butcher of that village, from which there was obtained "fifteen gallons of clear oil." The live weight of the dog was stated to have been 270 lbs. We are not informed how this dog had been fed. But from various examples, and particularly from that of swine fed on slaughter-house offal, are we not forced to regard the assertion, that the fat of animals can be increased "*only* by means of food containing no nitrogen," as not supported by fact?

In the foregoing remarks, I have not adverted to the theory advocated by some chemists—as by Dumas, Boussingault, Paen, &c.,—that the fat of animals is wholly assimilated from oil ready formed in the food, and that potatoes, beets, carrots, &c., are incapable of fattening stock, because they contain no oil. It is deemed unnecessary to occupy space in discussing a theory which the experience of a great number of farmers plainly proves to be unfounded.

In concluding this communication, allow me to express the hope that the spirit of investigation which is already so widely enkindled, may be guided by reason and judgment, and continue till we shall be able to see and realize the important benefits resulting from an union of "SCIENCE WITH PRACTICE."

MERINOS IN VERMONT AND NEW-HAMPSHIRE.

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L. TUCKER, ESQ.—I will once more invite the attention of the readers of the Cultivator to a few remarks upon Vermont sheep.

January 2d, 1846, had the pleasure of examining the Hon. Wm. Jarvis' flock of Spanish Merino sheep, which have descended from importations made by himself in 1809, '10, and '11, when he was United States consul at the port of Lisbon. [For a particular description of the importation of Spanish sheep, the reader is referred to Mr. Jarvis' letter, published in the Cultivator, new series, vol. 1, p. 126.] Mr. Jarvis is wintering about one thousand sheep, a part of which are Saxons, and a cross of the Merino on the Saxon. I have examined sheep in different parts of the country, and have seen sheep from all of the most important importations that we have any account of. I have seen those termed "Paulars," "Rambouillets," "Guadaloupes, and "Escurials." I have seen larger sheep, heavier fleeces, and finer wool, but I think I have never seen any sheep carrying more fine, clean, soft wool, in proportion to the weight of carcass, than Mr. Jarvis' descendants of his Spanish importations. They are free from jar, and not much given to wrinkling and doubling of the skin about the neck and body. They are not as much wooled on the legs and about the face as many sheep in the country that are denominated "pure" *this*, or "pure" *that*, but the wool on the flank and belly is long, thick, and nearly as fine and soft to the touch as on any other part of the body. Mr. Jarvis keeps his sheep in flocks of two or three hundred, and the consequence is they do not attain that size, that those do, that are bred from his sheep and kept in smaller flocks. An instance of this kind may be seen in the flock of Mr. Remelee, of Shoreham, who has several from Mr. arvis' flock, resembling the Liecester in size more than the Merino. We purchased of Mr. Jarvis three bucks and three ewes.

We were next shown a full-blood Dutch bull, color black and white, of fair size, and in appearance a very good animal. We were next invited by his son to look at a full-blood Arabian horse; color light grey, and unlike any thing of the horse kind in this country, in form and symmetry, that I have seen, and especially of our Morgan breed; but the little we saw of his movements convinced us that he was a horse of remarkable action.

I am inclined to think that there are more pure blood Spanish sheep in the country than Mr. Jarvis accounts for. (See his letter above referred to.) And should it be found practicable to make a new importation of sheep from Spain, (which, from the best information I can gather, I judge to be extremely doubtful, though several have told me they are about making an effort,) I shall be slow to entertain the belief that they will add much, if any thing, to the means already in our possession of increasing our valuable breed of sheep. Taking Mr. Jarvis' account of the importation of Spanish sheep for the basis of calculation, it appears that from the first importation by Chancellor Livingston, in 1801, to the close of 1811, there were about 7000 Merino sheep introduced into the United States, and were landed in different ports from Maine to Georgia, though the largest portion of them arrived in Boston and New-York.

In speaking of the diseases of sheep, Mr. Jarvis gave it as his opinion, that foot-rot *will breed* in flocks which run on low, wet pastures, and that it is also contagious. "But," said he, "if a man continues it long in his flock the fault is entirely his own," and then went on to give the following prescription for its cure:

"Blue vitriol, 3 parts; white lead 1 part, mixed with linseed oil, about thick enough to use in painting a house; pare and clean the feet with soap suds; then apply it."

This he recommends as a sovereign remedy for foot-rot, with proper care in changing the sheep from the foul, to clean dry pastures at each dressing, which, in the worst cases, may require two or three.

On our return, we called again on Mr. Hull, of Wallingford, and purchased two of his best young ewes. I have since examined Mr. J. A. Conant's flock, of Brandan, and Mr. W. R. Sandford's flock, of Orwell, in Rutland county; Messrs. Elithարp's and Hall's flocks, of Bridport; Messrs. Wright's, Remelee's, Chipman's, and North's flocks, of Shoreham, in Addison county, and found them all in the possession of valuable flocks of sheep. But perhaps the anecdote of the justice, will, in part, illustrate my views in relation to most of the above flocks. His honor having listened to the plea of the plaintiff's counsel, very readily decided the case in his favor. "But stop," exclaims the opposite counsel, "I have a word to say," when after delivering a labored argument in favor of his client, the justice again decides, "and *you* have got your case." I might discriminate if time and space would allow, but prefer to leave the task to gentlemen from other counties and other states who may take the trouble to examine our sheep. J. N. SMITH.

Vergennes, March 10, 1846.

KEEPING POTATOES SOUND.

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WE have had occasion to commend the practice of keeping potatoes through the winter in heaps, out of doors, by using abundance of straw and but a moderate quantity of earth as a covering. We have repeatedly known heaps of 60 or 70 bushels, covered with a *compact* layer of straw *one foot thick*, and only a few inches of earth outside, to endure the winter and early spring *without the loss of a peck*. In a late experiment of the writer, a heap thus covered wintered through with the loss of not half a peck, although a large portion of the same crop which was removed to the cellar was lost by the rot; and at the same time that many neighbors lost three-quarters of their potatoes buried in the usual way, that is with only a few inches of straw under a foot of earth. It will be perceived at a glance that the mode here proposed secures in an eminent degree, sufficient protection from frost, dryness, and ventillation. All potatoes in heaps, when buried early in autumn, should be kept constantly well ventilated by a hole and wisp of straw in the top. The mass of rotten potatoes, so usually found at the apex of the heap, and usually attributed to freezing, is more frequently the result of foul confined air rising to the top.

MANURING BY GREEN CROPS.

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Can land be improved merely by plowing in the crops which grow in it?

Suppose land to be in clover; which will most improve the soil, or conduce to the product of the succeeding crops, plowing in the entire growth of clover, or feeding it off with stock?

At what stage should a green crop be plowed in to obtain from it the greatest benefit?

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Some have doubted whether land can be improved by its own products alone. The idea with those who entertain this doubt, seems to be that every ingredient of the vegetable structure comes originally from the soil, and that hence no principle of fertility can be added to a given extent of soil simply by the decay of vegetation which it has produced. Without attempting to argue this point in detail, it is sufficient, perhaps, to advert to the well-known fact that the fertility of forest lands increases as long as the growth of wood continues.

It is related that Van Helmont planted a stalk of willow in a box containing a quantity of earth. He carefully dried and weighed the earth before planting the twig. He watered it with distilled water only. After several years, he took out the willow which had attained an increased weight of many pounds, dried the earth as before, weighed it, and ascertained that it had lost only an ounce or two of its original weight.[*]

The fact that vegetables do derive a part of their substance from the atmosphere, admits, at least of no *reasonable* doubt; but certain kinds of plants are believed to draw their food from the atmosphere in greater proportion than others. It seems reasonable to believe that those substances which have once formed plants, are capable, by decomposition, of contributing to the growth of other plants whose nature and composition are more or less similar.

It has been ascertained that carbon enters largely into the structure of plants—it is, indeed, next to water, the chief element of their composition.[†] It is taken up in the form of carbonic acid, both through the leaves and the roots. Those plants which take the largest proportion of their food from the air through the leaves, are the broad-leaved kinds. By cultivating those of this description, and depositing their substance in the soil, we can increase the elements of fertility—that is, we can draw from the air and concentrate in the soil, matter which will supply food to other plants.

So much for our first question. In regard to the second, we incline to the opinion from evidence derived from experience and observation, and considerable inquiry, that it is better to feed off clover than to plow it in. We believe that the best crops are obtained where the clover is depastured. This subject has been brought up for discussion at several of our agricultural meetings, and the opinion expressed by nearly all farmers who have had practical acquaintance with it, was in agreement with our own. Col. COST, member of the Assembly from Ontario, and an extensive and judicious farmer, stated that he had practised plowing in clover, and had observed the results thus produced compared with those where it had been fed off, and he gave a decided preference to the latter course. The experience of Gen. HARMON, of Wheatland, well known as one of our most successful wheat-farmers, has also, we are authorized to say, induced him to form the same opinion. He has noticed that his wheat crop is always better where clover has been depastured.

We are not aware of many experiments having been made expressly for the purpose of testing this point, though its importance is such as to render the most careful experiments necessary, and we would suggest this to agricultural societies as one of the subjects to which their attention should be directed.

We recollect having read an account of an experiment made by the late Gen. HARRISON, of Ohio. He had a field of clover consisting of several acres—the soil of clayey loam, and of uniform character. He divided it into two parts, one of which was pastured, chiefly with cattle, and on the other the growth of clover was plowed in. In the autumn, the pastured portion was plowed, and both parcels were sown to wheat. The wheat was best on the part which had been pastured, as were also the two succeeding crops, consisting, if we mistake not, of oats and clover.

Various causes are assigned for the effects above mentioned. 1. It is said that by burying in the soil a mass of vegetation while it is filled with sap and juices, a *sourness* is produced which is hurtful to succeeding crops. 2. In some instances where a considerable quantity of clover has been plowed in, its effect is thought to have been to make the soil too "hovery," or "puffy," as it is variously called—that is it becomes too loose at the bottom of the furrow and the roots of the wheat do not obtain a sufficiently firm hold.

That sourness is actually caused by the fermentation of a large mass of green clover or other vegetation, does not seem improbable. The sap contained in the stalks and leaves may be forced by fermentation into acetic acid, and the sugar and starch be turned to vinegar. Every one may have noticed that a pile of green weeds or green grass, becomes after a time actually *sour*—the acid may be perceived both by smell and taste—and we are unable to see why the same effect should not take place when a heavy crop of clover is turned in with the plow. At all events, the effects of the practice are such that many farmers declare they would prefer having the clover cut and carried off the land rather than that it should be turned in green.

Mr. VEDDER, of Geneva, informs us that he formerly plowed in clover, but that he has latterly discontinued the practice. He is of opinion that the chief value is in the root of the plant, and he states that he has obtained better crops where the clover has been cut and the stubble only plowed in, than by plowing in the green tops. Gen. HARRISON, also, in explaining the results of the experiment above mentioned, suggests that the principal amelioration of the soil is by the roots. They may produce a favorable effect in several ways. Where the soil is too compact, they make it more friable by dividing and opening it, and the decomposition of the roots themselves furnishes a large amount of matter.

We will suggest another mode also by which the roots improve the soil. It is known that plants exert a *vital* action on the soil. It is by this principle of vitality that they are able to reduce the various substances of which they are formed, into food on which they can subsist. Inexplicable as is this mysterious power, it must be great; for by its exercise the hardest flints and the other mineral elements which enter into the vegetable structure, are perfectly dissolved, are taken up and made to perform their several offices in the tissues. Perhaps no plant is more remarkable for this action than clover. Some idea may be formed of it by observing the effect produced when its roots are brought in contact with rocks or stones. Under this vital energy, through the agency of light, heat, air, and moisture, the solid rock is made to crumble, and gradually to wear away. Now may not this action of the roots tend to bring the earthy matters composing the soil into a state more favorable to the support of other plants? May not the mineral elements be thus rendered more easily soluble and available to other crops?

It may be said that the sourness before spoken of, can be avoided by allowing the clover crop to ripen and die before it is plowed in. This is probably true, and it has been tried in some cases, but still preference has been given to the practice of feeding off the crop. The fact upon the whole seems probable, that there are certain substances, as nitrogenized salts, &c., conveyed to the soil in the dung and urine of animals, whose action is more favorable to fertility than the crude undigested vegetable matter.

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[*] The writer is unable to refer particularly to this experiment, but is confident that the facts are stated in general terms.

[†] The substance of plants chiefly consists of woody fibre, starch, and gluten. Woody fibre and starch, and also gum and sugar, consist of carbon and water only. Thirty-six pounds of carbon and thirty-six pounds of water, form seventy-two pounds of woody fibre. Thirty-six pounds of carbon and forty-five pounds of water, form eighty-one pounds of dry starch or gum. Thirty-six pounds of carbon and forty-nine and a half pounds of water, form eighty-five and a half pounds of loaf-sugar or sugar-candy,—and thirty-six pounds of carbon and twenty-seven pounds of water form sixty-three pounds of humic acid.—*Johnston*

But to speak more particularly in regard to the third question proposed for consideration. We have no doubt that land may be improved by clover unaided by stock. We have shown that a portion of the organic matter of which the plant is composed may be drawn from the air. This matter, which ultimately becomes *humus* or vegetable mould, is, to a certain extent at least, essential to the fertility of soils. Prof. JOHNSTON states that rich soils usually contain five per cent. or more, of their weight of organic matter. To secure the full benefit of this, we should adopt that mode of management which will admit of the accumulation of the largest quantity, and apply it at the time and in the manner which will produce the most favorable operation. Now by allowing the crop to become fully grown, we shall, of course, obtain the most, and by allowing it to become partially ripe and dry, we shall avoid the objections resulting from acetic fermentation. This, therefore, is the state in which we think the greatest advantage would be derived from plowing in a crop of clover.

DISCUSSION IN RELATION NO CATTLE.

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THE discussion at the weekly Agricultural meetings at Boston the past winter, have been reported in many of the papers published in that city. Judging from the reports, we should suppose the meetings had been generally well attended, and that a considerable number of the farmers have taken part in most of the discussions. We give the following abstract from the reports of the discussion on neat cattle.

Mr. GLEASON, of Weyland, pays considerable attention to rearing cows, and is careful to select calves that come from good milkers ; the bull should also be of good stock. Two calves are put with a farrow cow and turned to pasture. If the cow is unwilling to "own" the calves, he shuts up the cow and puts the calves in a pen near by. She will generally own them in a few days, but if not, he puts a dog in the stable with the calves. The dog will bark and the cow bellow, and in a short time she will own the calves. He lets the calves run four months with the cow. He keeps more or less of the no-horn or "buffalo" cows, and thinks they are good milkers. [The *Boston Cultivator* in reporting this discussion, calls these no-horned cattle "Galloways," and we have noticed some of the other Boston agricultural papers apply that name to them, but with what propriety we cannot discover. We have seen, in various parts of the country, many of these "buffalos," (a strange name truly, for cattle which have no horns,) but have never found more than three or four which exhibited any of the distinguishing marks of the Galloways.] In selecting cows, Mr. G. prefers those which have a bright full eye, light neck, thin shoulders, broad hips, small tail, flat horn, and the udder of a yellow color. He would avoid a cow with black teats. He would avoid driving milch cows any considerable distance—even half a mile he thought too far to drive to pasture, and was satisfied it made the quantity of milk less. He was certain a cow wintered in the stable would give less milk than one which had the range of the yard.

For oxen, Mr. G. prefers a full eye, long face, broad back, deep, broad brisket, rump rather sloping than rising. An ox with a very thick hide is not generally so spirited. He was careful not to buy an ox with crooked legs, as they were more likely to get lame. Commences breaking steers when they are two years old.

In relation to breeds, he said he had reared Durhams —they were larger and handsomer than native cattle, and sold more readily—had seen fine milkers among the Ayrshires and Durhams, but he thought the native cows, on the whole, were as good as any.

Mr. Buckminster, editor of the *Mass. Ploughman*, admitted he was somewhat prejudiced against the Durham breed of cattle. He said he had taken much pains to know what was their product in milk and butter. He had invited the owners of such cattle to show the yield of their dairies, and though he had found instances of very good cows of that breed, he was bound to say, generally, they were not equal to the native cattle of the country. He said we have cows in New England that have made their 14, 16, and 18 pounds of butter per week, and he thought it would be easier to find a dozen such cows, than a dozen Durhams that would yield as much in proportion to their size. We want the greatest yield in proportion to the size of the animal and the nourishment she requires. He called attention to the fact that the State Agricultural Society, in its efforts to improve the stock of the country, had lately imported Ayrshires and Devons, but no Durhams. He thought the milk of cows which gave a very large quantity, was not so good. He had a cow which made fifteen and a quarter pounds of butter per week in June last, and the greatest quantity of milk she gave was 18 quarts a day.

Mr. SHELDON of Wilmington, had paid considerable attention to the rearing of cattle—had owned at one time about 100 yoke of oxen. He thought benefit had been derived from imported cattle by crossing with the native. The mixed breed have better feet than the natives. An ox should be broad between the eyes, should have straight, broad, and rather short hoofs, round ribs, straight back, hips falling off about an inch. Nine out of ten oxen which give out, fail in the fore feet. The legs should be straight, and they should toe straight forward. He thought it a bad practice to drive oxen with a goad, (a stick with a brad in one end of it,) as they did in Maine—it irritates the cattle and makes them either crowd or haul apart. The best feed for working oxen, he thinks, is chopped hay and Indian meal.

Mr. G. thought sufficient care was not taken with our native cattle, to improve the breed. A good milker usually has a pet calf, and it is too apt to be given to the butcher. He said, our native cattle sell better at Brighton, than the Durhams. [For what purpose? Are *real* Durhams sold there?—ED.] He bought one cow at Brighton that had such excellent qualities that all her descendants (?) proved superior. She had the right blood. He thought cows should be stabled and kept warm in winter, to afford most profit—would give them chopped food. If the fodder was chopped and wet they would need but little water. He preferred shorts and carrots to Indian meal for cows. He thought it very injurious for cows to drink ice-water—would make the water for them to drink, as warm as that of brooks in summer. If cattle were swelled (hoven) he gave them half a pound of ground mustard seed mixed with lard.

Mr. BROOKS, of Princeton, said he raised from 100 to 150 heifers annually. He buys the best he can find, before they are weaned and weans them on porridge. They were mostly of the native breed. He generally gets about four good cows in every ten reared. He thought the Durhams did not stand the winter well, and he believed the Mass. State Society had acted wisely in not importing Durhams, as the Ayrshires and Devons were preferable. The Ayrshires, he thought, winter as well as the natives, but he preferred the Devons. He spoke of the Devons imported fifty years since by Christopher Gore. [Upon what authority does Mr. Brooks speak of Devons having been imported by Gov. Gore? We are in possession of proof that the bull which obtained such celebrity as the "Gore bull," and whose numerous descendants, to the latest generation, are commonly called the "Gore breed," was presented by the late Charles Vaughan, Esq., of Hallowell, Maine, to Gov. Gore, in the year 1792. The year previous, 1791, Mr. V. imported two bulls and two cows. While on the passage, one of the cows produced the calf given to Gov. Gore. The cows were selected from a milk-farm in the vicinity of London, and instead of being Devons, were probably *Yorkshire Short-Horns*..—ED.]

Mr. Brooks mentioned a disease with which milccows in his neighborhood had been afflicted. They had a propensity to eat bones—they became weak and their bones would sometimes break in trying to rise from the ground. He attributed the disease to the want of phosphate of lime in their food. He had cured the disease by giving the cows bone meal. This disease is confined to milch cows. Neither farrow cows or oxen are attacked by it.

Mr. COLE, editor of the *Boston Cultivator*, observed that this disease had been prevalent in some of the dairy districts of England. Chemists had attributed it to the exhaustion of the phosphate in the soil, and had recommended bone manure, which had been used with success.

Mr. DAVENPORT, of Mendon, had kept a cow in the stable four or five years, she seldom leaving it. He gives her two quarts of meal per day, regularly, and roots and hay, with grass in the season of it. He covers her with a thin covering in summer, to keep off the flies, and with a thick blanket in winter to keep her warm—warms her drink in winter. Under this treatment, there is but little falling off in the quantity of milk till a short time before calving. Though she is a small cow, not weighing over 700 pounds, she has given from eight to sixteen quarts at a milking. Her [hind] quarter is long and her skin loose.

For swelling or hoven, Mr. D. gives a little weak ley. He puts about a pint of ashes to a pailfull of water. He had given this to both cattle and horses for other diseases with good effects.

AGRICULTURAL STATISTISICS OF NEW-YORK.

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BY S. S. RANDALL.

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LUTHER TUCKER, ESQ.,
Secretary of the N. Y. State Ag. Society:

DEAR SIR—In accordance with your request, I have carefully compiled from the original returns in the office of the Secretary of State, and herewith transmit to you, such statistics in reference to the agricultural interest of the State as I conceived would be most acceptable to the members of the society with which you are connected, and best adapted to the diffusion of an accurate knowledge of our agricultural resources and condition.

The entire population of the state, as returned by the marshals, is 2,604,495: comprising 1,311,342 males, and 1, 293, 153 females.

The aggregate number of farmers and agriculturists in the state, is 253, 292, or somewhat less than one-tenth of the entire population, and one-fifth of the whole male population. The number of legal voters in the state, (exclusive of persons of color,) is 539,379; consequently the number farming to all other professions, is very nearly as one to two.

The whole number of acres of improved land in the state is 11,737,276: of which 1,013,665 is devoted to the production of wheat; 1,026,915 to that of oats; 595,135 to that of corn; 255,762 to that of potatoes; 317,099 to that of rye; 192,501 to that of barley; 117,379 to that of peas; 16,232 to that of beans; 255,496 to that of buckwheat; 15,322 to that of turneps; and 46,089 to that of flax; wheat and oats being the great agricultural staples of the state; corn and rye holding the next place, potatoes and buckwheat, in about equal proportion the next, and barley, peas, flax, beans, and turneps, following in the order in which they are here named; the least number of acres being devoted to the culture of the turnep.

The western and northern portions of the state are best adapted to the cultivation of wheat, potatoes, oats, while the southern and eastern portions seem most favorable to corn, barley, peas, beans, turneps and flax. The middle counties afford the best encouragement to the raising of cattle.

Of the 1,013,665 acres employed in the raising of wheat, the number harvested during the year is reported at 958,234, yielding an aggregate of 13,391,770 bushels, exceeding by 1,438,263 bushels the amount raised in 1840, and averaging a fraction under 14 bushels to the acre. In the county of Monroe, the average yield is 19¼ bushels; in the county of Kings, 19; in each of the counties of Orleans and Niagara, 18; in the county of Clinton, 17½; in Genesee county, 16½; in each of the counties of Cayuga, Ontario, Livingston, and Franklin, 16; and in each of the counties of Onondaga, Richmond, Seneca, Warren, and Wyoming, 15. In two of the outer wards of Brooklyn, the average yield was 24 bushels to the acre; In the town of Wheatland, Monroe county, 22 bushels, and in Sweden, same county, 21.

From the 1,026,915 acres devoted to the production of oats, the aggregate number of bushels harvested during the year is stated at 26,323,051, exceeding by 5,594,313 the quantity raised in 1840, and averaging nearly 26 bushels to the acre. In the counties of Seneca and Kings, the average exceeded 35; in Monroe and Ontario, 32; in Onondaga, 31; in each of the counties of Cayuga, Dutchess, and Livingston, 30; in each of the counties of Orleans, Niagara, and Rensselaer, 29; in each of the counties of Chenango, Madison, Oneida, Orange, Wayne, and Yates, 28; and in each of the counties of Chautauque, Clinton, Columbia, Jefferson, Queens, Richmond, Suffolk, and St. Lawrence, 27.

From the 317,099 acres devoted to the production of rye, the aggregate number of bushels harvested during the year is stated at 2,966,322, being 18,591 bushels less than were harvested in 1840, or an average of nearly 9¼ bushels to the acre. In the county of Kings, the average product is reported at nearly 20 bushels to the acre; in the county of Richmond, at 14½; in the county of Jefferson, 13½; in each of the counties of Clinton, Orleans, and St. Lawrence, 12; in Chenango, 11½ in each of the counties of Erie, Livingston, Rensselaer, and Wyoming, 11; in each of the counties of Schenectady, Queens and Essex, 10½; and in each of the counties of Albany, Delaware, Franklin, Fulton, Genesee, Herkimer, Lewis, Monroe, Montgomery, Orange, Warren, and Westchester, 10. In the ninth ward of the city of Brooklyn, 265 bushels were obtained from 16 acres, being an average of 25 bushels to the acre; and an equal average crop was obtained in the town of Gravesend in the same county.

From 595,135 acres planted with corn, the aggregate number of bushels harvested is returned at 14,722,115, being an increase of 3,636,973 over the harvest of 1840, and averaging nearly 25 bushels to the acre. In the county of New-York, the average yield was 40; in Kings county, 38½; in Richmond, 35; in Suffolk, 34; in each of the counties of Orange, and Westchester, 32; in Rockland, 31; in each of the counties of Monroe and Orleans, 30; in each of the counties of Niagara, Ontario and Seneca, 29; in each of the counties of Chemung, Chenango, Jefferson, Oneida, Onondaga, Putnam, and Tioga, 27; in each of the counties of Clinton and Wayne, 26½; and in the county of Broome, 26.

From 255,762 acres planted with potatoes, the aggregate number of bushels obtained, was 23,653,418, or an average of 90 bushels to the acre. In Jefferson and Franklin counties the average yield exceeded 150 bushels; in St. Lawrence, 145; in Clinton and Orleans, 137; in Essex and Genesee, 125; in Washington, 122; in Suffolk and Wayne, 120; in Chautauque, 112; in each of the counties of Kings, Monroe and Niagara, 110; in each of the counties of Ontario, Cattaraugus, and Cayuga, 105; in Allegany, 99; in Yates, 98; in Seneca 97; and in each of the counties of Lewis and Queens, 95. In each of the towns of Antwerp and Rutland, in Jefferson county, the average yield per acre was 187 bushels. There has been a falling off of the potato crop of upwards of six millions of bushels since 1840.

From 117,379 acres sown with peas, the aggregate number of bushels raised was 1,761,504, or an average of 15 bushels per acre. In the town of Westchester, Westchester county, upwards of 170 bushels are returned as having been produced from 3¼ acres, averaging 56 bushels per acre. In the county of Kings, the average crop was 35 bushels; in Richmond, 24; in Putnam, Queens, and Wyoming, 20; in Onondaga and Orleans, 19½; in Suffolk, 18; in each of the counties of Genesee, Madison, Montgomery, and Rockland, 17; and in each of the counties of Albany, Allegany, Cayuga, Chautauque, Erie, Livingston, Monroe, Niagara, Oneida, Ontario, Seneca, St. Lawrence and Steuben, 16.

From 16,232 acres devoted to the raising of beans, the aggregate number of bushels produced was 162,188, or an average of 10 bushels per acre. In the town of Westfield, Richmond county, from 2¾ acres 228¼ bushels were produced, being an average of 114 bushels per acre; in the ninth ward of the city of Brooklyn, 1960 bushels were raised from 19¼ acres, being an average of 100 bushels per acre; in the town of Newtown, Queens county, the average was 91; in the county of Westchester 20; and in the counties of Cayuga and Chautauque, 15 and upwards.

From 192,504 acres sown with barley, the aggregate number of bushels raised during the year preceding, is returned at 3,108,705, exceeding by 610,535 bushels the crop of 1840, and averaging 16 bushels per acre. From 11 acres in the county of Kings, 360 bushels were raised, being an average of nearly 33 bushels to the acre. In county of Schoharie the average return exceeded 22 bushels to the acre; in the county of Suffolk, 44 bushels; in the county of Richmond, 25; in each of the counties of Onondaga and Westchester, 20; in each of the counties of Madison, Monroe, Niagara, and Ontario, 19; in each of the counties of Cortland, Oneida, and Schenectady, 18; in each of the counties of Cayuga and Chautauque, 17½; and in each of the counties of Allegany. Chenango, Essex, Franklin, Rensselaer, and Seneca, 17.

From 255,495¾ acres of buckwheat, the aggregate number of bushels raised was 3,634,679, exceeding 12,390,241 bushels the quantity raised in 1840, being an average of upwards of 14 bushels to an acre. In one of the outer wards of New-York 300 bushels were obtained from 8¼ acres, or an average of nearly 38 bushels to the acre. In each of the counties of Onondaga and Ontario, the average was 21; in Genesee, 19; in each of the counties of Cayuga, Kings, Putnam, Richmond, Schenectady, Seneca, and Wayne, 18; in each of the counties of Chemung, Chenango, Clinton, Livingston, Montgomery, Niagara, Tompkins and Yates, 17; in each of the counties of Albany, Chautauque, Cortland, Queens, Rensselaer, Steuben, Tioga, and Westchester, 16; and in each of the counties of Allegany, Broome, Delaware, Dutchess, Erie, Herkimer, Monroe, Oneida, Orange, Schoharie, St. Lawrence, and Ulster, 15.

From 15,322½ acres devoted to the production of turneps, the aggregate number of bushels raised was 1,350,332, being an average of 88 bushels per acre. In the county of Suffolk, however, the average is as high as 240; and in one town of that county (Riverhead) the average yield was 293 bushels. In Kings county the average was 197; in each of the counties of Monroe and Queens, 180; in each of the counties of Niagara and Rockland, 155; in Ontario, 148; in Wayne, 146; in Richmond, 142; in each of the counties of Onondaga and St. Lawrence, 140; in Otsego, 135; in Orleans, 126; in Cortland, 125: in Clinton, 122; in Essex, 121; in Cayuga, 120; in Steuben, 115; in each of the counties of Delaware, Oswego, Saratoga and Schenectady, 110; in each of the counties of Franklin and Jefferson, 108; in each of the counties of Chemung and Montgomery, 107; in each of the counties of Genesee and Seneca, 105; in Chautauque, 104; in Wyoming, 103; in Livingston, 99; in Allegany, 98; in each of the counties of Tioga and Warren, 95; in Washington, 92; and in each of the counties of Cattaraugus, Lewis and Schoharie, 90.

From 46,089 acres of flax, the average number of lbs. produced was 2,897,062¼, or an average of 62⅛ pounds to the acre. In the town of Islip, Suffolk county, 120 pounds were produced from one quarter of an acre; in Poughkeepsie, Dutchess county, 360 pounds from five-eighths of an acre; in the towns of Amenia and Rhinebeck, in the same county, an average of 350 pounds per acre is returned; in Pleasant-Valley, 285, and in Clinton, 275. The average product in the county is 237 pounds per acre. In Jefferson county the average is 190; in Columbia, 187; in each of the counties of Chautauque and Chenango, 180; in each of the counties of Lewis, Queens and Washington, 175; in each of the counties of Orange and Ulster, 165; in Essex, 164; in each of the counties of Clinton, Cortland, Franklin, Oneida, Putnam and Rensselaer, 150; in each of the counties of Oswego, Sullivan and Westchester, 140; in Warren, 139; in Delaware and St. Lawrence, 135; in Broome, 132; and in each of the counties of Greene, Hamilton, Monroe, Onondaga, Richmond, Saratoga, Steuben, Tioga and Wyoming, 100 and upwards.

The aggregate number of heads of neat cattle in the State is 2,072,330, being an average of upwards of 35,000 to each county, of which there are nearly 86,000 in the county of Jefferson; 85,464 in the county of Oneida; nearly 78,000 in the county of St. Lawrence; 66,885 in the county of Chautauque; 63,745 in the county of Chenango; 62,555 in the county of Delaware; 61,706 in the county of Otsego; 59,712 in the county of Orange; 57,506 in the county of Erie ; 55,482 in the county of Steuben; 53,440 in the county of Herkimer; nearly 52,000 in the county of Allegany; 49,498 in the county of Onondaga; 47,258 in the county of Dutchess; 45,256 in the county of Cattaraugus; 45,216 in the county of Madison; 43,527 in the county of Washington; 41,584 in the county of Cayuga; and 41,300 in the county of Oswego. The number of neat cattle under one year old is 334,456, and the number over one year old is 1,709,479. The aggregate number of neat cattle is less by about 130,000 than in 1840.

The aggregate number of cows milked is returned at 999,490, or an average of nearly 17,000 to each county. The aggregate number of pounds of butter made during the year was 79,501,733¼, or an average of about 1,350,000 to each county, or 79½ pounds to each cow milked; while the aggregate number of pounds of cheese is returned at 36,744.976, being an average of 622,796 pounds to each county, or about 36 pounds to each cow milked. In the county of Oneida, the number of cows milked is stated at 47,713; from which 3,876,276 pounds of butter, and 3,277,750 pounds of cheese were made, or an average of upwards of 80 pounds of the former and 68 of the latter. In the county of Orange, from 42,256 cows milked 4,108,840 pounds of butter were obtained, being an average of 97 pounds to each. In the county of Jefferson, from 41,360 cows, 3,080,767 pounds of butter and 2,802,314 of cheese were obtained; averaging 74 pounds of the former and nearly 70 of the latter. In the county of Kings, the average number of pounds of butter made from each cow milked was 110; in the counties of Delaware and Chenango, 100; in each of the counties of Putnam, Sullivan and Tompkins, 95; in each of the counties of Cortland, Greene, Onondaga, Schenectady, Schoharie, Seneca, Wayne and Yates, 90; in Livingston, 85; and in each of the counties of Dutchess, Ontario, Saratoga, Steuben, Tioga, Warren, and Washington, 80.

In the county of Herkimer, 8,208,796 pounds of cheese were manufactured from the milk of 36,255 cows, being an average of 226 pounds to each; in the town of Fairfield, in the same county, 1,355,967 pounds were manufactured from the milk of 3,910 cows, being an average of nearly 350 pounds. In the county of Madison, 2,022,855 pounds were obtained from 21,513 cows, being an average of 90 pounds; and in the county of Lewis, 1,420,368 pounds from 18,024 cows, or an average of 80 pounds. In the county of Otsego, the average exceeds 50 pounds.

The aggregate number of horses in the State is 505,155, being an increase of over 29,000 since 1840. In Oneida county there are 17,303; Onondaga, 16,968; in Monroe, 16,811; in Jefferson, 16,397; in Otsego, 14,183; in Cayuga, 13,922; in Erie, 13,527; in St. Lawrence, 13,470; in New-York, 13.346; in Steuben, 12,310; in Wayne, 12,258; in Madison, 11,774; in Dutchess, 11,342; in Tompkins, 11,191; in Washington, 11,115; and in each of the counties of Albany, Allegany, Chautauque, Chenango, Genesee, Herkimer, Livingston, Orange, Rensselaer and Saratoga, 10,000 and upwards.

The aggregate number of hogs returned is 1,584,344, or an average of nearly 27,000 to each county. In Dutchess county there are 66,828; in Orange, 57,265; in Columbia, 54,477; in Jefferson, 53,068; in Onondaga, 52,907; in Monroe, 48,493; in Niagara, 45,723; in

Cayuga, 43,546; in Ulster, 42,627; in Washington, 42,189; in Rensselaer, 39,262; in Otsego, 38,485; in St. Lawrence, 38,150; in Erie, 38,087; in Saratoga, 37,882; in Ontario, 36,986; in Steuben, 35,987; in Wayne, 35,873; in Westchester, 35,609; and in each of the counties of Albany, Chautauque and Niagara, upwards of 30,000. In 1840, the aggregate number of swine in the state was 1,916,953; being an excess of 332,619 beyond that of the present year.

The aggregate number of sheep in the state is 6,443,855, exceeding by 1,062,630 the number returned in 1840, and being an average of upwards of 107,000 to each county. Of this number 1,870,728 are under one year old, and 4,505,369 over one year old. The number in the county of Otsego is 270,564; in Madison, 263,132; in Ontario, 257,821; in Washington, 254,866; in Chautauque, 235,403; in Chenango, 223,453; in Livingston, 218,258; in Steuben, 217,658; in Dutchess, nearly 200,000; in Oneida, 194,589; in Onondaga, 190,429; in Allegany, 184,901; in Jefferson, 184,526; in Cayuga, 175,148; in Monroe, 173,952; in Columbia, 172,959; in Rensselaer, 170,552; in St. Lawrence, 168,314; in Wyoming, 166,365; in Genesee, 156,578; in Erie, 148,732; in Tompkins, 135,787; in Delaware, 135,633; in Wayne, 130,562; in Yates, 130,134; and in Cortland, 108,862. The aggregate number of fleeces obtained is returned at 4,607,012½, comprising 13,864,828 pounds of wool, less by 208,306 pounds than the aggregate fleece of 1840, and averaging about three lbs. to a fleece. In the county of Kings the average is upwards of six pounds.

Very respectfully, your ob't serv't,
S. S. RANDALL.

Albany, Jan. 1, 1846.

BREEDING REGISTER FOR SHEEP.

A breeding register is very convenient as well as important in assisting the shepherd to preserve facts in relation to the various individuals of his flock—such as their age, genealogy, quality, &c. The following plan, given by Dr. HOLMES, in the *Maine Farmer*, appears to us to be a very good one.

"*Breeding Register from July* 1, '38, *to July* 1, '39.

No	Year in which born	Put to ram. No.	Date of lambing.	No. of lambs.		Classification of the lambs, &c., &c.	General Remarks.
				rams	ewes.		
25	1833	27-4	6—4	1	1	1 class small and close curled.	Their lambs: one very feeble and died.

"EXPLANATION.—In the first column is the number of the ewe—having two notches on the upper edge of the right ear, (20) a notch on the lower edge of the left ear, (3) and two notches on the upper edge of the left ear, (2) No. 25. In the second her age. In the third, the number and age of the ram, which in this instance means ram No. 27, and four years old, being born in 1834. In the fourth column, the day and month in which the lamb came—thus, 6—4 means 6th day of 4th month. In the fifth and sixth columns are the numbers of ram and ewe lambs. In the seventh column is a classification of the lambs, according to their appearance at one or two days old. The last column is general observations."
uable as well for present information as future reference and comparison.

Sow corn for fodder any time this month

LONGWORTH ON THE STRAWBERRY.

The Cincinnati Horticultural Society have lately published a communication on the strawberry, by N. Longworth. Its principal object is to establish the necessity of staminate plants planted separately, but in near proximity, to render most varieties productive. In the course of his remarks, he made some interesting observations, which coming from an experienced cultivator, may be of value to many of our readers.

He says, "In a late number of the Farmer and Mechanic, it is stated that three cultivators near Boston, sent *four thousand five hundred* quarts to market in a *single season*. What will our market gardeners say to this? * * * Mr. Culbertson brings more strawberries to our market than any other person. The greatest quantity he has brought in any *single day* was *four thousand quarts*."

The following remarks are made in different parts of the communication on some of the different and most celebrated varieties:

["Hovey's (old) seedling] stands unrivalled with us for size, where impregnated. But we have other varieties, that are as good bearers, of nearly equal size, and of finer flavor. But I would highly recommend his (old) seedling to all cultivators, whether for family use or for sale."

Speaking of a fine variety he obtained from England, under the erroneous name of Keen's seedling, he says: "The Methven is a different, and far inferior fruit. I have the Methven Scarlet, sent me from Philadelphia, as the Keen. It is pistillate, and bears large fruit, but is an indifferent bearer, and of inferior flavor."

He thinks that the variety described as the Old Hudson by Downing, and as "a fruit with a neck," is not genuine, and is entirely different from the Old Hudson of Cincinnati and Philadelphia, which appears to be unknown at New-York and Boston. The Old Hudson "is wholly defective in the male organs, and has been thrown by as unproductive. It is a large and finely flavored fruit, and when properly impregnated, a great bearer. * * * Mr. Arbegust for many years sold nine-tenths of the strawberries brought, to our market, and raised the Hudson only. Whilst I could from one-fourth of an acre, scarcely raise a bushel, he would raise 40 bushels. His fruit was much larger than any other brought to market, and commanded from 25 to 37½ cents per quart. He made a handsome competence from the sale of this fruit. His secret he kept to himself, and had been as much noted for the size of his fruit, and the quantity raised on a given space of ground, in Philadelphia (where he removed) as he was here. A chance observation of his son one day, in my garden, saying, "I must raise but little fruit, as my plants were all males," first led my attention to the subject. I soon discovered that there were what he called male and female plants, and communicated the fact to our market gardeners. The result was, strawberries rapidly increased in our market, till as fine as had been raised by Mr. Arbegust, were sold at from 3 to 10 cents per quart, and he ceased to cultivate them."

It is well known to many of our readers that Mr. N. Longworth is a strong advocate of the indispensable necessity of staminate plants, to fertilize the pistillate ones, and render them productive. But he does not consider the plant as diœcious, but that stamens and pistils both actually exist, only one or the other are usually and permanently defective, not absent. On the other hand, Hovey and others, consider this defective quality as only caused by rich cultivation, and hence that sterility may be remedied by diminished fertility of soil, while they do not deny that productiveness may also result from the impregnation by well developed staminate plants. Others deny all benefit from staminate plants. Many experiments, conducted more accurately than most persons are accustomed to do, are needed to settle such points satisfactorily. Longworth says, "Mr. Downing, in a recent letter, assures me, that last season he raised a fine crop of Hovey's seedling, on a bed far separated from all others." The argument contained in this fact he does not demolish, but overleaps as follows :—"Mr. Downing, I am positive, had not Hovey's seedling unmixed with others." An intelligent and scientific cultivator should know by the appearance of the growth, leaf, or fruit, Hovey's seedling from other varieties. The suggestion however, that a variety may ripen seed, drop them and propagate thus new varieties, intermixed, and possessing the staminate character, is not without weight. The reason, too, that the plants of the nurseryman, who has many different varieties within a small space, to fertilize each other, are productive; while after they are sold and widely removed, the cause and the effect cease, is entirely plausible.

DISEASE IN POTATOES.

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Mr. Editor—The columns of almost every agricultural paper I examine, are teeming with articles on the subject of diseased potatoes, but as yet, the cause seems buried in as profound a mystery as at its first appearance. It is not at all understood; and it is very much to be desired that the recently instituted inquiries in Europe, by scientific men, may lead to its discovery, for the effort thus far here, has rather shrouded the subject in deeper doubt and uncertainty, than cast any light upon it.

I made a series of experiments the past year, the results of which, I herewith hand you, not because they have elicited any new fact, but that a knowledge of them may prevent their repetition by others, for it is evident they lead not to its development, though possibly, in some other respects, worthy of it.

The ground was a sandy loam, manured with barnyard manure, at the rate of thirty two-horse waggon loads to the acre. It was plowed, dragged, furrowed with a one-horse plow in rows three feet asunder, and planted on the 12th of May. The potatoes were cut into setts containing three or more eyes, and dropped along the furrows eight inches apart. On the first ten rows, which were twenty rods long, was put a composition consisting of one bushel of lime, one of ashes, one of salt, and one of plaster, well mixed, dropped in small handfuls on each cutting of the potatoes; and the balance of the field had a dressing of like quantity of same composition, with the exception of the salt. The potatoes were then covered with a plow, and rolled with a moderately heavy roller. That portion of the piece where no salt was used vegetated directly, and came on with a vigorous and luxuriant growth; where salt was used, they were a long time coming up, and the growth then exceedingly slow, with a curled unhealthy appearance of the vine.

They were cultivated twice and hoed once. At the last time of cultivating, a one-horse plow was passed twice though each row, levelling the earth to the vines.

The appearance of all of them, with the exception of the salted, was exceedingly fine and promising, and of the latter, there were some twenty-five hills which receiveda less portion of the preparation, that were perhaps more vigorous than any of the others, which we attributed to this cause. They continued growing finely until August, when the ground, with the exception of the salted portion, was completely covered with vines, and a finer or more promising field is rarely seen. At this period we had a succession of light showers, followed by warm, close weather, and our vines soon began to decay, presenting precisely the same appearance as in the two preceding years, in which they have been affected. This continued until they were entirely dead, and the general impression was that the crop was destroyed; on digging, however, we were agreeably disappointed to find them, though rather small, entirely sound, and thus far, they have preserved perfectly well.

I took from the acre two hundred and twelve bushels. That portion which was salted never reached maturity. The yield was less and the quality inferior to where none was used, and this experiment has therefore demonstrated that neither salt, lime, ashes, nor plaster, are a preventive to the attacks of this disease, or a preservative of the tuber after attack, for this condition of vine was general here, as is also this soundness of the potato.

There were some exceptions to this general decay of vine, and wherever this occurred, so far as my observation has gone, it has been on sward ground, late planted, and no manure used. I planted a piece adjoining the one on which the experiments were made. It was done on the 3d day of June, and the vines continued perfectly fresh and green until destroyed by the frost this fall, while others planted at short intervals of time, on fallow ground, for the purpose of determining whether this has any agency in averting the disease, were in every instance destroyed, though the tuber, in all of them remained sound.

Can you explain this new caprice of the epidemic, or assign any plausible reason for this general destruction of the vine and soundness of the potato? or why, those on sward ground escaped, and on fallow perished? It is certainly very inexplicable, although it puts an end to the speculation that the disease is caused by insects, for if this were so, all these pieces would have been affected in the same manner. P.

Waterville, 1846.

IMPROVING WORN-OUT LANDS.

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Mr. Tucker—I will give you my views of the best manner of improving lands that were formerly good but have become poor by bad farming. And first, no land ever was good where the subsoil was of a cold gravelly nature. The top soil of our limestone land will vary from four to six, and sometimes eight inches deep, with a subsoil of red loam—the latter is generally thought good when it will make brick. There are thousands of acres of this kind of land both in Virginia and Maryland that have become very much impoverished.

To improve this land, I would collect large quantities of everything that will make manure; such as leaves, weeds, sods from the fence corners, rags, rotten wood, soap-suds, &c. These I would keep in a pile, sprinkling plaster over it occasionally, to prevent the escape of ammonia. In the next place, I would commence with the corn crop. I would have three stout horses, and a plow (of Washburn's make, of Frederick,) 22 inches from the bottom of the share to the bottom of the beam, (without a coulter.) I would plow the land late in the fall 12 inches deep, which would throw up part of the subsoil to the action of the sun and air. By all means have some manure put on the land before the corn is planted. The next season; plow in the corn stalks in June or July,—in other words make it the fallow-field for a wheat crop. Plow as above stated the first time, harrow well, and then, if you have it, put on about 50 bushels of lime to the acre, and some manure. Plow shallow the second time, and about the middle of September sow 1¾ bushels clean wheat to the acre, harrow well, and then sow seven quarts of clean timothy seed to the acre, and roll the field. In the spring following, sow about the same quantity of clover seed. If the land is inclined to be wet, you may vary the seed a little, and sow 8 quarts of timothy—if very dry, sow 8 quarts of clover and 6 of timothy. No stock must go on the land after the wheat comes off in the fall, nor until the next season, when the clover is in blossom, and then only enough to crop a little. The next summer the field may be mowed for the first crop, and the second crop be left on the ground. There must be no stock on the field this year.

I can assure you I have seen land improved 100 per cent by this course of farming. It is the commencement of what may be called a rotation of crops, such as in Lancaster county, Pennsylvania, has so much improved the soil. Wm. Todd.

Utica Mills, Maryland, May, 1846.

Cutting food for Sheep.—Thomas Noble, in the Ohio Cultivator, says—"My sheep consist of 1600 head, and so far, I have lost none. We cut all their feed, and the saving thereby is at least one-third."

DESTRUCTION OF PEACH BUDS.

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It very rarely happens that the young fruit of the peach is killed except by the severe cold of winter. It often excites surprise that the cultivator is enabled to decide with tolerable certainty, by the time that the severe weather of winter closes, whether a crop may be expected.

The cause most frequently destructive to the peach crop in the northern states, is warm weather late in autumn or during winter, causing a slight swelling of the buds. After thus started, even though to a slight degree, very severe cold destroys them. Cultivators of fruit wish to know, as soon as practicable, whether their crops are destroyed. When the thermometer sinks several degrees below zero, there is nearly always reason to fear that at least a part of the fruit-buds are killed; as previous warm weather, even if it has scarcely swelled the buds, may have filled them with moisture, and rendered them liable to destruction. To determine the point, then, let the flower buds be examined a few days after the cold weather, by cutting them transversely through the middle. If they are injured, the centre will appear dark brown, as represented by *a*, Fig. 56; if uninjured, they will appear of a uniform greenish white, with no brown spot at the centre, as shown by *b*, the stamens, and other parts of the flower being entirely fresh. A little practice will enable any one to determine this point at a glance.

The first buds are readily distinguished from the flower buds, by their round and obtuse form, as shown by *c*, while the leaf buds are slender and more pointed as exhibited by *d*. On the lower parts of the young shoots, the fruit buds are usually double (*e*, *e*,) with a leaf bud between.

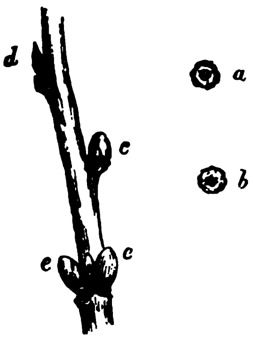

Fig. 56.

The past winter exhibited some curious illustrations of the effect of situation and other causes in preserving the life of fruit buds. A considerable portion of the northern part of Western New-York consists of irregular hills and valleys, the hills rising from fifty or a hundred feet or more above the ordinary level. In the valleys, from their warm sheltered situation, the growth of the peach is more rapid; it does not become so well ripened and hardened for winter; warm days more quickly start the buds; and the cold air of still, frosty nights settling in the hollows, and the radiation to the clear sky above being unobstructed by the stillness of the air, the destruction of the fruit buds is very frequent. But on hills, these causes do not operate; hence in many localities, while the crops fail rarely half the time in valleys, they are scarcely ever even diminished on the hills. In an orchard belonging to the writer, thirty feet above the neighboring creek valley, not one in ten of the fruit buds escaped the present year; while on another hill only twenty-five or thirty feet higher, the trees are full of blossoms. Indeed, the difference in temperature, as indicated by a common thermometer, between a valley and a hill fifty or a hundred feet above it, in favor of the latter, usually amounts to many degrees on still clear nights. This difference alone would often be sufficient to cause entire failure in one case, and preservation in the other.

On many trees of medium elevation, at the present time (early part of 5 mo.) the upper branches only, are filled with blossoms, while the lower are entirely destitute; the reflected heat from the ground having started the lower buds and thus rendered them liable to injury from frost.

Another singular appearance is, that while many trees from one foot upwards show no blossoms and are perfectly bare, the lower straggling branches which happened to be under the snow at the time of the cold, are filled with a dense profusion of flowers. Such trees exhibit accurately the depth of the snow at the time of the injury, and show conclusively when it took place.

In other cases, snow, by keeping the trees cool in warm days, and thus retarding the swelling of the buds, may save the crop, though afterwards exposed to cold several degrees below zero.

The morning sun on a frosted plant, by causing sudden thawing, is usually destructive to its vitality, when gradual thawing would be safe. Hence buildings and steep hills on the east side of peach trees, have led to the singular and erroneous conclusion that *east wind* does the mischief. Hence also one reason that unfrozen rivers and lakes, by the screen of fog they throw off, afford protection, as well as by softening the severity of the cold.

The preceding and other observations, have led to the following conclusions:

1. That the difference of several degrees between the temperature of sheltered valleys and small hills close at hand, shows that the common unqualified statements of the temperature by the thermometer, of certain parts of the country, is too indefinite for dependence.
2. That in countries abounding in small hills and valleys, or consisting of rolling land, the hills are far best for peach orchards, soil and other things being equal. Unfreezing bodies of water in the neighborhood, of course reverse the rule.
3. That examination of the fruit buds after cold weather, if on the lower branches only, may lead to too unfavorable conclusions.
4. That if the buds have been but slightly swollen, a few degrees below zero usually causes their destruction.

THE POTATO.

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To what localities is the potato indigenous? It is well established that this esculent was not known on the old continent till it was carried there from America. The noted navigator Sir Walter Raleigh introduced it into Ireland and England in 1565. The same year it was also taken to England from Santa Fe, by Capt. Hawkins. It has been stated that Raleigh obtained it in Virginia. But is it now found in a wild state in any part of North America? Loudon, in his *Hortus Brittannicus*, gives Peru as the native country of the potato, and travellers have asserted that it is found not only there, but in Brazil, and some other parts of South America.

We have been led to some reflections on this subject by a perusal of SCHOOLCRAFT'S "Report on the Iroquois," to the Legislature of New-York, 1846. Speaking of the plants cultivated by these tribes, (p. 12, 13,) it is remarked—"The potato was certainly indigenous. Sir Walter Raleigh in efforts at colonization, had brought it from Virginia under the original name of *openawg*. But none of the North American tribes are known to have cultivated it. They dug it up, like other indigenous edible roots, from the forest. But it has been long introduced into their villages, and spread over the northern latitudes far beyond the present limits of the zea maize."

If it is a fact that the potato was known to any of the Indian tribes which formerly occupied territory now in possession of the United States, before the discovery and settlement by the whites, how long is it since the wild plant became extinct? Or may it not still exist in some of its natural uncultivated haunts?

FEEDING HENS.—J. N. Dowd, in the Boston Cultivator, says a bushel of corn will last hens twice as long as a bushel of buckwheat, but that he prefers the latter, as it makes hens lay eggs more than any other grain, and overbalances in profit, its additional cost.

CARROTS FOR HORSES.—J. Frost, of Elliotville, in the same paper, says that carrots fed to horses with dry food, are worth as much as oats, feeding alternately, *one day with carrots and one with oats.*

HINTS ON THE CONSTRUCTION OF FARM-HOUSES.

BY A. J. DOWNING.

Any one may see that a decided taste is beginning to manifest itself at the present moment in rural architecture. Every where, in the middle and eastern states, one sees that the newly built cottages and villas are no longer in those clumsy and unmeaning forms that ten years ago so generally prevailed.

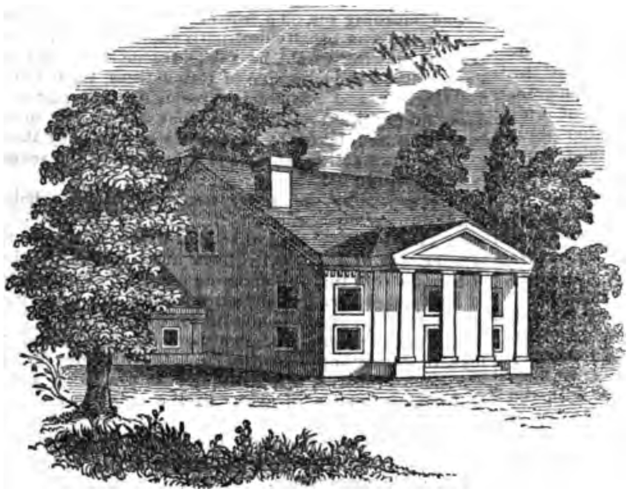

Fig. 52.

This is a most hopeful and encouraging symptom. It tells us very plainly that our country proprietors have begun to give some thought to the construction of their own houses; that they are no longer content with what the nearest carpenter or mason may have to offer as the latest style; that they have at least a desire for something fit for their own wants, the beauty of which is of a kind becoming and suitable to the purpose in view.

In this aspect of things, nothing is more to be desired, than the general prevalence of correct principles of taste among our agriculturists of intelligence.

The **Farm-House** in this country is not the hovel of the serf—is not the hut of a peasant. It is the cottage of a freeman—the proprietor of the soil he cultivates. It is the home of the best virtues and the soundest hearts. It must necessarily—if it be true to itself—give a character of moral and physical beauty to the whole rural scenery of the Union. Let us not deny, therefore, the importance of the farm-house. It seems to us to be worthy of the attention of every one who would render our country life expressive of its true usefulness and beauty.

We should be glad in this brief space, to say a few words about farm-houses; our limits will, however, only permit us to point out a few errors into which our country builders have hitherto fallen. Something may perhaps be gained even by considering the mistakes into which those most commonly fall, who have built with little reflection.

In the first place, we think a farm-house should be *unmistakeably a farm-house*. That is to say, it should not be a citizen's dwelling-house, or a suburban villa, set down in the midst of a plain farm.

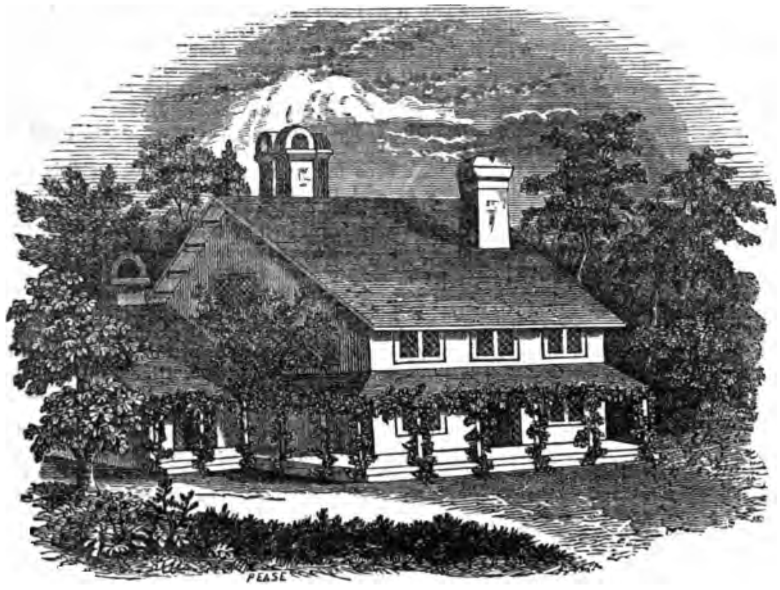

Fig. 53

Nothing has been more common for the past ten years, than to see a good substantial farmer building a large plain dwelling—unobjectionable enough as a plain dwelling—but to which he has been persuaded to add a Grecian portico, (fig. 52,) copied from a great house of the neighboring town or village.

The portico is very well where it belongs—as a part of a handsome villa, every part of which is carefully finished with corresponding elegance. It has nothing whatever to do with a true farm-house. It is too high to be comfortable by its shade or shelter. It is too costly and handsome to accord with the neat and rustic character of a farm-house. But it has been the fashion of the day, and, if the farmer has not reflected for himself, it is ten to one that he has fallen a victim to it, instead of employing the more comfortable and more characteristic verandah. Fig. 53.

Another of the greatest mistakes in building a farm-house, is to adopt any thing like a *flat roof*.—(Fig. 54.) A broad and rather high roof is as essentially a handsome feature in a farm-house, as the expanded chest and broad shoulders are in the farmer himself. It is a kind of beauty that springs out of a most natural and enduring source—manifest utility.

The roof of a farmer's house ought then to be high, so as to give him an ample garret—that useful store-house of country varieties. It ought to be rather steep, to bear and carry off rapidly the burdens of heavy snows and the violence of wintry storms. It ought to be strong, and little liable to speedy decay—that the purse may not be called on for frequent repairs.

The flat roof comes to us from southern countries and mild climates. In town-houses, and ornamental villas, in the classical styles let the architect satisfy the demands of art with such a covering to his house. But in the exposed farm-house, in our blustering, sturdy weather of the north, the farmer should have none of it. He must nestle under the high and broad roof which properly belongs to a northern climate. (Fig. 55.) This has all the beauty of thoroughly answering its purpose, and conveying at a glance the most complete notions of comfort.

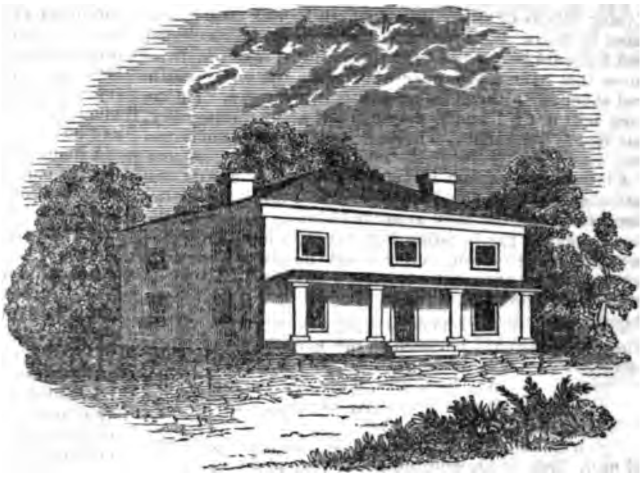

Fig. 51.

When it is desired to render a farm-house ornamental, it is the most fatal, though the most common of all mistakes, to suppose it should be done by the imitation—the meagre imitation of some gentleman's fine house. It is a mode that is never successful. It is the old story of the jay in his borrowed peacock's plumes. Every one detects and exposes the want of fitness and propriety. Fluted columns, ornamental pediments, moulded friezes, and the like, have little or nothing to do with farm-houses. They will give an ambitious and flashy character to the front; it will be belied by the useful and *every-day* character of the rear.

The truth is a farmer's house looks as ill when bedecked with the stolen ornaments of a highly architectural villa, as the honest dignified, plain farmer himself would, if tricked out in the fashionable finery of the reigning Paris exquisite. The beauty of *propriety* is a species of moral beauty even in houses and clothes.

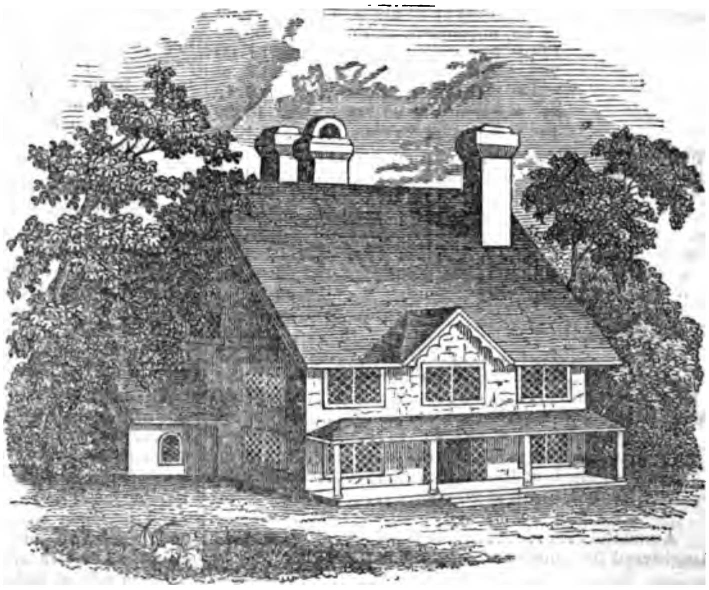

Fig. 55.

There should be a kind of homely country-like air about every genuine farm-house. It ought at the first glance to be recognized as belonging to the open meadows, orchards and pastures, that surround, and the fresh luxuriant trees that wave over it. It should be neat and strong, and capacious and comfortable. If something is wanted beyond this—and we are sure our farming countrymen will more and more desire a manifestation of the agreeable about their houses—then should something ornamental *combine itself with the most important and useful features* of the house. Let a *verandah* be added, which may be adorned, not so much with expensive pillars, as with beautiful and fragrant climbing plants. Let the porch be made a suitable covering to the principal entrances. Let the gables be enriched with simple ornaments, and the chimney stacks be built in some pleasing forms. These are the first points that really demand attention in a farmer's house, which we wish to raise to its highest expression of fitness and *beauty*. Some examples of this kind of rural architecture we hope to be able to offer at no distant time. These trifling hints may perhaps lead some agricultural friend to consider what is essential to the character of a farm-house, and thus at least prevent his marring the beauty of simplicity and propriety. A. J. Downing.

Highland Gardens, Newburgh, Jan., 1846.

Industry.—The people of Massachusetts annually produce 50 per cent. more property or wealth than any equal population in the United States, according to the most accurate returns. Though not one sixth of New-York in extent of territory, that state has seven hundred miles of railroad in operation.

Clover Seed exhausting.—A correspondent of the "Genesee Farmer" says that he has found raising the *seed* of clover to be very exhausting to the soil. What is the experience of other farmers?

Wheat.—The total amount of wheat imported into Great Britain in 1840, from all other countries, was 1,993,405 quarters. Only one twenty-fifth of this amount was sent by the farmers of the United States, though possessing equal advantages as to duty.

Shrinking of Corn.—The Genesee Farmer says that a bushel of shelled corn will shrink, from the time it is usually harvested till thoroughly dry, about 22 per cent. in bulk. Hence in statements of large crops, you must usually discount about one-fifth.

FATTENING HOGS.

L. Tucker, Esq.—I have frequently seen in the Cultivator details of experiments which I think are calculated to throw light upon the science of agriculture; and I should be glad to hear through that medium, from those that have had experience upon fattening cattle and sheep with the ruta-baga, carrot, beet, &c. I hope they will not wait until they can tell a favorable story. Let us have the truth, whether favorable or unfavorable.

I hereby send a few accounts of rearing shoats and fattening hogs, which I have tested. I do not think the breeds were of the most approved kinds. I bought the stock, having partly fallen into the opinion that "the breed is in the mouth, as one of my neighbors says. I am now satisfied that the less those persons have to do with hogs who pay no attention to the breed, the better.

9th mo., 8th, 1844, I shut up 5 pigs, worth	$9·50
They consumed 34½ bu. corn in the ear, 20 cts.,.	6.90
22⅓ " corn meal, 40 cts.,......	8.93
15 " apples, 6 cts., ...	90
5½ " potatoes, 25 cts., ...	1.38
Amount, ...	$27.61
3d mo., 25th, 1845, sold the above pigs at 3¼ cts. a pound, alive,..........................	25.00
Loss, ...	$2.61

Again, in the spring of 1845, I had 16 pigs worth,..................................		$16.00
They consumed 261 lbs. feed at 70 cts. a hun'd,		1.83
67 bu. corn meal, at 45 cts.,..		30.15
17½ " hog corn, at 40 cts.,...		7.00
28¾ " ears corn at 25 cts.,....		7.19
36½ " potatoes, at 25 cts.,....		9.12
41 " carrots, at 25 cts.,.....		10.25
19 " beets, at 25 cts., ...		4.75
2 pigs added to the above, ...		5.40
Time of feeding, about,.........................		0.00
Amount,..............................		91.69
Cr.		
By 6 pigs sold, $1.50, ...	$9.50	
" 7 barrows sold, at 3⅝ cts. a pound,.	35.23	
" 5 sows, " 3½ " .	22.99	
		$67.72
Loss,................................		$23.87

Again, 9th mo., 8th, 1844, I put up a sow to fatten, worth..............................	$7.50
Feed, 7½ bu. apples, at 6 cts.,..................	.45
1¾ " potatoes, at 25 cts., ...	. 4
17¼ " corn in ear, at 20 cts.,...........	3.45
4½ " meal, at 40 cts.,...................	1.80
2½ " cob meal, at 20 cts.,..............	.50
Amount, ...	$14.14
Slaughtered the above and sold 365 lbs., at 4 cts.,	14.60
Gain, ...	.46

The above sow was more than an ordinary sow for goodness.

And again, 9th mo., 8th, 1844, I put another sow with the above, which we will suppose ate as much as she. The grain and other things for these two, as well as for the other lots, was accurately measured.

Worth of sow,......................	$5.00
Amount of grain, &c., consumed,......	6.64
Amount,..........................	$11.64
Slaughtered and sold,.................	7.05
Loss,............................	$4.59

This sow did not do well, perhaps we ought not to consider it a fair case. Let others give their experience and we shall be enabled to judge of the profits and losses.

J. E. Macomber.

Farmington, 4th mo., 17th, 1846.

WESTERN SALT.

Mr. Tucker.—In the last (Dec.) No. of the Cultivator, is an essay "on the curing of provisions for the British Market," by "an apprenticed packer." His directions are no doubt good, much superior to the careless, go-ahead mode usually practised in this country. And provisions, so put up would not only be much better for the British market, but for our own; and no doubt would pay for the extra care and attention.

I find in the article mentioned, the following: "By way of parenthesis, it may as well be here noted, that neither Kanawha, Zanesville, or Goose creek salt should be allowed to touch your meat, either directly by mixture with the salt, or indirectly, through the medium of brine; for so sure as any of these salts are used, so sure will your meat become slimy like fish, and be imperfectly cured." By this, great injustice is done to the salts named, and especially Kanawha. To correct which, and that our domestic manufacture may stand on its own merits, divested of prejudice is the object of this communication.

I would state that I have been many years at Kanawha, and a few years at Geddes, N. Y., engaged in the manufacture of salt, both coarse and fine, and that I am not now engaged in its manufacture anywhere, or have any interest in it, direct or indirect. I would premise that all the salt water obtained anywhere in the Ohio Valley, or on any of the tributaries of that river, is of a different quality, or the impurities in it are different from that got in any other section of the United States. The impurities in the salt water within the region mentioned, are all of them muriates, or what the chemists would call of this order. Consequently there is none, or if any, a mere trace of either the carbonate or sulphate of lime, the great impurities that the manufacturers have to contend against in New-York, and at Holston in this state. The weight of all these impurities is much greater than that of brine, and will not crystalize except at a great heat, or incorporate with the crystal of salt only when the heat is great enough to produce considerable agitation in the brine.

Now my process of making brine, that will completely saturate it with salt, must and will throw to the bottom all these impurities, and if suffered to remain in a state of rest for twenty-four hours, and drawn off without agitation will afford a pure brine. The quantity of impurities at the bottom will of course depend on the purity of the salt; which can easily be told in drawing off, by the greasy and slimy appearance, as soon as all the pure brine is exhausted.

To make pure and perfect brine from any salt, or salt of the quality of the ordinary fine salt of Kanawha, Zanesville, Goose Creek, or of the Onondaga, N. Y. fine salt, put in fifty pounds of salt to every sixteen gallons of rain or river water, heated to the temperature of 150 degrees ; stir it well for an hour or two, and let it stand perfectly still for twenty-four hours, and it is fit for drawing off, and it is pure brine down to the impurities, which are all in the bottom and are, if of the western salt, as before described—if or the N. Y. salt, a mass of white matter like lime. If it should be wished to make brine from cold water, salt and water in the same proportion; but should be well stirred, for a week or ten days, each day; and then suffered to stand for 24 or 48 hours, and proceed as before. The colder the water the greater the length of time necessary to make perfect brine; and a certain test at all times, is to suspend a small line over the brine so that it will sink into it a few inches; when the crystals of salt adhere to the line, it is then saturated and pure brine.

Undoubtedly it will take more of the common salt of our country to make a given quantity of pure brine than it will of the pure coarse salt either of the domestic or imported article; but then the difference in the price will make the common article much the cheapest.

The salt heretofore manufactured at Kanawha was made in iron kettles with rapid boiling; consequently as is the case with all salt so made, much of the impurity that is in the salt water is incorporated in the crytals of salt by its continual agitation. But all the salt now made at Kanawha (between two and three millions of bushels this last year) is made in wooden reservoirs, heated by pipes running through the brine, with the steam generated by the boilers in reducing it to brine, at a temperature of some 30 or 40 degreess below boiling, so that there is but little agitation in the brine; making as pure an article of fine salt as is made anywhere, either domestic or foreign.

The coarse or alum salt made at Kanawha, is as pure as any salt made in the world, (there has not been much made for the last few years, because of the low price of the imported article it has been more profitable to make the fine salt) as the accompanying analysis, by Professor James B. Rogers, (late assistant geologist of this state,) will show.

Professor Rogers says:

"A chemical examination of good average specimens of the three following varieties of salt, give these results.

Kanawha Alum salt, after being carefully dried, absorbs from the air, of moisture,	0.66 per ct.
Turks Island, ditto,......................	0.06 "
Holston, ditto,......................	merely a tracc.
Kanawha Alum salt contains of earthy impurities, principally muriates,.........	0.9 per ct.
Turks Island, ditto,......................	2.2 "
Holston, ditto.,......................	1.5 "

The impurities in the two latter consist principally of sulphate of lime, and magnesia."

The coarse salt made at Syracuse, N. Y., is also a good and pure article. equal in purity to any imported. The Holston, (Washington county, Va.) salt is a coarse salt; but there never was but a small quantity of it made there of that quality. The salt water there is quite similar to that of New-York, and the salt usually made, like their fine salt.

We have and do make as good salt in this country as the "Liverpool coarse sack salt," the opinion of "an apprenticed packer" to the contrary notwitstanding; who no doubt formed his opinion honestly, but rather hastily.

There is much prejudice existing against our domestic salt, which I am in hopes our manufacturers will disperse, by making, as they can, a pure and good article.

Locust Lane, Fayette Co. Va. G. H. P.

PROTECTION OF PEACH TREES.

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L. Tucker, Esq.—In the November number, among the "Facts and opinions condensed from various exchange papers," I observed an extract from the Southern Planter, in which G. C. Dobson recommends the use of tar to preserve the peach and nectarine tree from worms, in which he has succeeded without any failure. I have the experience of nine years to add to this testimony in behalf of tar, when used to the root of the peach tree to preserve it from the worm. My method of using the tar does not differ except that I apply a bandage of muslin to keep the tar in its place, and more effectually to keep the insect from the trees. I have restored worm-bitten trees, that bled profusely, to a sound bark and abundant fruitfulness, and that now, at the age of eleven or twelve years, are thriving trees.

My experiments to discover the remedy for the "yellows" have partially failed, owing, I believe, to having blended the "yellows" and the effects of the peach worm together. I look now to chemistry to give a clue to the matter.

Analyzation of a healthy tree and of a portion of the soil in which it grew, compared with the elements of a fatal case of the "yellows," and of the soil in which it perished, may give us a hint of something that art can supply, to cure the disease, or prevent its occurrence.

I would be much obliged to any of your chemical correspondents, who would favor your readers with a description of a simple apparatus, for conducting analyses of the most common earths, alkalies, and minerals, with the various tests, and mode of application. The advantage would be great over our present state of information. If every farmer could ascertain what proportion of lime, magnesia, potash, &c., were contained in each of his fields, and how much magnesia, &c., if any, in the lime he buys. Andrew Bush, M. D.

E. Coventry, Chester Co., Pa.

BUTTER-WORKER.

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In the Cultivator, new series, vol. 1, p. 340, the Editor noticed a *Butter-Worker* exhibited at Worcester Mass. I wrote there, requesting a more particular description of it, in hopes thereby, to improve upon the one that I had previously begun to make on a similar principle; but as I was not favored with a reply, mine was finished without having the desired advantage of a pattern to work from. It however operates satisfactorily. I will endeavor to describe the parts, and can venture to recommend it as preferable to the usual mode by a hand ladle, particularly in cool weather.

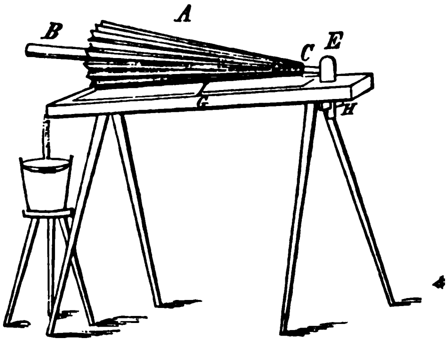

Fig. 00.

A, fluted roller, 24 inches long, 8 inches in diameter at handle, tapering to 2 inches at the shank; 16 flutes or creases, worked to an edge so deep as to make the inside of the flutes, a right angle and running out to the surface of the shank.

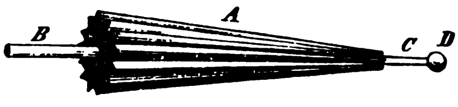

Fig. 00.

B, handle; straight, 7½ inches long, 2 in diameter

C, shank; 5 inches long, 1¼ in diameter.

D, ball; 2 inches in diameter.

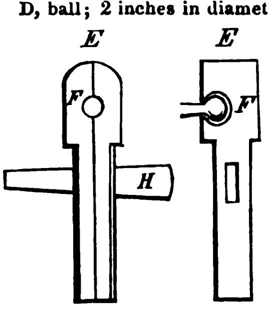

Fig. 00

E, socket block, made of two pieces, each 3½ by 1¾ inches, shouldered to rest on the top of table, passing through, secured by a key wedge through both parts, length so as to bring the bottom of the roller fair upon the block.

F, socket turned into the block, one half the socket in each part. 4 inches from the top, to enclose and confine the ball, which should, however work freely.

G, table, inclined.

H, wedge-key, to secure the socket block firmly to the table.

I, marble block, 24 inches square; around it a gutter cut in the table to receive the buttermilk, and conduct it to a central point, where it can pass off in one stream.

If a more simple or useful machine for the purpose is in use, I shall be pleased to see it described in the Cultivator. **Robt. White, Jr.**

New-York, 4*th mo.*, 1846.

HAY MAKING.

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Why not adopt the same rule in regard to the time of cutting clover and grass for hay, that is followed in cutting medicinal herbs? The object in both cases is to secure the intrinsic virtues of the plant. In curing herbs, as all acquainted with the subject admit, the most proper time for cutting is when they are in full bloom: and it is also admitted that they should be cured in the shade, because if exposed to the more direct influence of the sun and air, some of their valuable properties would be evaporated.

We know there is some difference of opinion in regard to the proper time for cutting grass. The advocates for ripe hay contend that there is more "substance" in it, and that it will "go further" in feeding stock, than that which is cut while it is in blossom. And so we suppose there is still more "substance" in scrub-oak brush, and that it would go still farther in feeding (not *supporting*) stock. Admitting there is more substance in ripe grass, is it a kind of substance which affords more nourishment to animals?

Plants, at the time of flowering, contain starch, gum, and sugar; all of which are known to nourish animals. In the formation of seed, the stems and leaves are exhausted of these substances, and the substance which remains is chiefly woody fibre. But it may be said that the composition of woody fibre, starch, and gum, are nearly the same. Admitted, but this does not prove that animals are able to extract nearly an equal amount of nourishment from each. The composition of the diamond, the hardest of all substances, may be said to be similar to that of starch, gum, &c.,—carbon being the chief element of all; but the digestive organs of animals would hardly be able to convert the diamond into organized tissue. And though woody fibre, if eaten by cattle or sheep, might "stick by the ribs," we think the ribs would not acquire from it much fat, or the system much strength.

In some parts of the country, animals are actually *fattened* for market on hay alone. This may sound strange to those who feed their stock only with clover and timothy which has gone to seed; for we presume their stock was never thus fattened. But where this object is attained, the grass is cut while it is quite green, (not past bloom) and made and preserved with great care. It is true there are some kinds of grasses,—as the "spire grass," or "Kentucky blue grass," (*Poa pratensis*) which make but little bulk in seed-stalks, the chief growth consisting of leaves which spring from the root. The greatest value in fodder would be obtained in such cases by allowing the crop to grow till it had acquired its greatest bulk. This remark however by no means applies to clover, or timothy, or the grasses usually cultivated for hay.

In making hay, we would expose it to the sun and air no more than is required to effect its preservation, for the same reason that is above given in reference to curing herbs. Clover can be cured—indeed it is more conveniently cured—with but very little exposure to the sun. If it is not wet, and is fairly wilted, it may be put with forks, into cocks, which will weigh, when dry, about fifty pounds each, and will effectually cure. Timothy, also, may be cured in the same manner. The finer grasses, when thrown into a body, pack more closely and afford less space for the air; consequently they require to be more thinly spread in making.

Excepting with clover, which we never spread out of swath, our practice has been to spread out the swaths as evenly as possible, if the burden is stout, as soon as the dew is off; in the afternoon, rake and cock it before the dew falls. We prefer putting it in cocks, even if it is no more than wilted, because the sweating [illegible] will much facilitate the making, and if the grass is coarse and hard, it will render it much more soft. Besides, hay that has been well sweated in cock, is not liable to ferment in the stack or mow.

Whether the hay which was mowed and put in cocks on the first day will make so that it will do to go to the barn on the second day, depends of course on its condition, and the state of the weather. If all appearances indicate that the hay can be made sufficiently on the second day, (and repeated observations only can determine the degree of dryness which is required,) open the cocks and shake the hay out lightly, thoroughly breaking all the locks with the fork. But it should not lie spread out later than three or four o'clock in the afternoon, but should be put up again, or if dry enough, put in the barn by this time, lest it contract moisture. If from the condition of the hay or the appearances of the weather, there is a probability that the hay cannot be made enough in one day, let it remain undisturbed till the weather is favorable.

There are one or two other considerations in favor of early cutting which we omitted to notice above. It is admitted by physiologists that plants exhaust both their own energies and the soil, more in forming seed, than in the whole preceding portion of their growth. Thus when grass is suffered to ripen, it gives but little after-growth, and from the exhaustion mentioned, the sward more quickly dies out.

MR. WOOLWORTH'S LECTURES.

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In our May number, we published some resolutions which were passed at an agricultural meeting in Homer, in reference to the lectures of Mr. **Woolworth**, on Agricultural Chemistry and Geology delivered in that place. Through the *Cortland County Whig*, we have received the address which was made by Mr. **Amos Rice** to Mr. **Woolworth**, on the presentation to the latter gentleman of the silver cup, spoken of in the resolutions.

We have read the address and Mr. **Woolworth's** reply, with much pleasure. It is no flattery to say they are *good*, and could we find space for them in our columns, our readers would no doubt be gratified by their perusal; but we are compelled to pass them with only the following extract from Mr. **Woolworth's** speech:

"Do you ask me if I would make the farmer a learned man? I answer, yes, in all that relates to his business, and the processes by which it is carried forward. In this sense, I would have him learned as the Counsellor is learned in the principles of the Law; the Divine in Theology, and the Physician in Anatomy and Materia Medica. Will his arm lose its vigor because his intellect is strong, or his granaries be empty because his mind is stored with knowledge? The contrary rather. And then, as any human employment becomes intellectual, it increases in honor. It becomes appropriate to man—reasoning, thinking man. It loses that which is peculiar to the brute, or the slave, and acquires a character which is noble and dignified. In this way agriculture is destined to become the most honored of human pursuits. Such, it is even now rapidly becoming. Some of the means by which this change is now being wrought have been strikingly presented to you this evening. They have already changed the reproach of 'Book Farming' into an honor."

"Looking forward to the prospects before us, we are cheered by auspicious omens. Men of strong arms and stout hearts, and clear heads, are united in this great work. No division of sects and parties distract their counsels, and paralize their efforts. The spirit of the age is the spirit of peace—most congenial to the skilful cultivation of the earth. When the dark clouds of war frown over our beloved country, and threaten to deluge her fair fields in the blood of their cultivators, our hope is in such influences as the acts you cultivate exert. They will check the impetuosity of ambition, and change the fierce spirit of war to the quietness of peace."

PROFITS OF HENS.

......

A correspondent at New-Brunswick, N. J., gives the following account of an attempt to make hens profitable. He says—"I fitted up for them a spare out-building, letting them run in the barn-yard and in a small field, containing about an acre and a half. The result for the last year is as follows:—

Dr.	
To 45 hens, at 25 cents,	$11.25
" 4 cocks, at 50 cents,	2.00
" grain fed,	20.00
	$33.25
Cr.	
By 3302 eggs,	$34.02
" chickens killed during the summer and fall,	14.84
By 100 fowls on hand, at 25 cts.,	25.00
" 4 cocks, at 50 cts.,	2.00
	$74.86
	33.25

Thus you will see I have a clear gain of $41.61

My own labors I count as nothing, because they were given in the morning and evening, when I had little else to do. I hope this will induce all those farmers who now let their fowls roost in the trees, and get their living as they can, to build a fowl house, the ensuing season, and commence to keep a debtor and credit account of them."

In reference to the same subject a correspondent at Castleton, Vt., writes:—"I will state the amount of eggs that I gathered from the first of January, 1845 till the first of November, 1845, ten months.

Jan. and Feb.,	196
March,	358
April,	413
May,	375
June,	219
July,	112
August,	241
Sept.,	211
October,	113
Total,	2248

"I had 22 fowls—21 hens and 1 cock. One hen was set in April for early chickens. In June I killed five hens, and three more set and hatched, making four that raised chickens. There was feed by them constantly from the first of January to the first of July, after which they were fed morning and evening. They ran at large all the time, and many eggs were lost in consequence. I have looked over the last three volumes of the Cultivator, and I do not recollect to have seen so large an amount of eggs from the same number of hens."

SOUR SOILS NOT NECESSARY TO PRODUCE SORREL

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L. Tucker, Esq—Among the many popular superstitions in vogue at the present day, there are none more easily refuted than that which supposes acidity in the soil to be the *sine qua non* to the growth of sorrel, (*Rumex acetosa.*) So far from the truth is this idea, that it may with confidence be affirmed, that on such a soil, sorrel can not grow. At least, it may be demonstrated, that, unless an alkali be present in the soil, the plant cannot attain perfection. Why a sour soil should be considered more necessary for this plant, than for the pie plant, or any of our sour fruits, I am at a loss to imagine. That it is not, may be conclusively shown by a chemical analysis of the plant itself. The leaves of sorrel owe their acidity to the presence of a salt called by chemists, the *binoxalate of potassa*. This is composed of two equivalents of *oxalic acid*, and one of potassa. This alkali, all will admit, is drawn from the soil. But whence comes the acid. As a preliminary to answering this question, I will state that oxalic acid is composed of *two* eq. of carbon, *three* eq. of oxygen, and *one* eq. of water. This differs from carbonic acid, which is largely absorbed from the atmosphere by all plants, only in containing less oxygen.

The following table exhibits the composition of several vegetable products, and shows how simple is the process of converting any one of them into another.

Oxalic acid contains	2 eq. carbon,	3 eq. oxygen,	1 water.*
Carbonic acid	" 2	" 4	"
Acetic acid	" 4	" 4	" 4 hy'gn.
Tartaric acid	" 4	" 5	" 3 "
Cane Sugar	" 12	" 11	" 11 "
Grape Sugar	" 12	" 14	" 14 "
Starch	" 12	" 10	" 10 "
Gum	" 12	" 11	" 11 "

Now it has been shown by Liebig, that it is from the atmosphere that plants derive all their carbon, in the shape of carbonic acid; and from the above table, (which is mostly from Liebig,) it will at once be perceived that carbonic acid has only to part with one equivalent of oxygen and take one of water, and we have the identical acid, which, uniting with an alkali furnished by the soil, forms the acid salt found in that pest of the farmer, sorrel.

That the above is a correct account of the *modus operandi* of nature, can hardly admit of a doubt; and if so, we must look to physical, not chemical means to rid us of the nuisance. W. R. P.

Bowling Green, Wood Co., Ohio.

RUST ON WHEAT.

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Mr. Tucker.—Having been a subscriber of the Cultivator for many years, and having read the different opinions in regard to rust in wheat, I avail myself of the present opportunity, to offer a few remarks upon that subject.

In the year 1840, I had sown 9 acres of wheat, 4 of it being in an orchard. It grew admirably, very tall and thick, with fine long ears, and was admired by all who saw it. This was within one week of harvest, when there arose a very heavy and thick fog, coming on from the east, with a gentle wind sufficient to waft it along, and continued two days, after which time it cleared off, and to my regret, I discovered my wheat was ruined. But what was my surprise, when I came to harvest that part in the orchard, I found all the wheat under the west side of the apple trees entirely free from rust. That circumstance fully confirms, what has ever been my opinion, that fog is the only true cause of rust. I believe if there was a high, tight board fence erected on the east of the wheat field, it would protect the wheat as broad as the fence is high. Never in my long course of experience, have I known rust without fog. I see by the January number of the Cultivator, that a Tompkins county farmer, who suffered in one piece of wheat so greatly, had another piece a half a mile distant, escaped entirely. But he says it was sheltered on two sides by a wood, which goes a great way to corroborate my statement.

Richmond.

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We have received a communication from Mr. Wm. Byers, Brook Hall, Va., giving his views on the subject of rust and smut in wheat. He supposes that rust is most likely to take place in those seasons which induce a vigorous growth of wheat in the latter part of winter or early spring. In consequence of this early or premature growth, he supposes the energies of the roots become exhausted about the commencement of the filling of the grain, and that the grain fails for want of support. Under these circumstances, he thinks, if wet weather ensues, the roots decay and "the black rust or smut is produced;" and if the weather is dry, "the root fails, and the red rust is very apt to make its appearance; or if not, the grain is small and the crop light." If, however, according to his theory, "a dry spell of weather takes place after the early growth, and continues till sixty or seventy days before harvest," and should the weather then be seasonable, a second growth takes place, with a new set of roots that may sustain and mature the crop. As an artificial remedy against rust, he would therefore endeavor to induce this "second growth" of roots by which he believes the crop is sustained to maturity. And in this view he recommends pasturing the grain which exhibits this early, and, as he considers, premature growth, with light stock; such as calves, colts, sheep, &c. This, he thinks, "will aid the owner, by the support of his stock, and will be tolerably certain to make a good crop of wheat." If pastured, he recommends grazing it pretty closely, "until about seventy-five or ninety days before the usual time of harvesting." These opinions, he states, are the result of many years' observation.

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* Water is composed of 1 eq. of oxygen and 1 of hydrogen

In relation to the above ideas of Mr. BYERS, we remark that some of them are entirely new to us, and though we would by no means be hasty in pronouncing an opinion, we must acknowledge that at present, we are unable to reconcile his theory with what is genenerally admitted as fact, in regard to rust. The advantages of grazing wheat as mentioned, under certain circumstances, we have often seen. Mr. BYERS relates several cases of a wheat crop having been preserved from the Hessian fly by grazing, which are worthy attention. He thinks that close grazing destroys the fly, or prevents it from obtaining a lodgment in the wheat; a conclusion which seems to be justified by the instances related from his own experience.

LINIMENT.

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MR. EDITOR—I send you a recipe for a liniment, which has been long in use, and has been found highly efficacious in all cases of sprains, bruises, and wounds, external or internal, on man or beast. It has been used with great success in severe cases of rheumatism, often effecting a positive cure, and no farmer should be without it who has not something better to substitute in its place.

One-half oz. spirits hartshorn;
Two oz. camphor gum;
One gill spirits turpentine;
One-half pint sweet oil;
One pint alcohol.

Shake it well together, and apply, rubbing it in smartly with the hand. JUNIUS.

MODES OF FARMING.

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MR. TUCKER.—The experimental number of the Cultivator was sent me by some unknown friend. I became interested in the publication, and have been a constant reader of it from that day to the present. It is not my object to write its history—that is extensively known; or to offer a mere complimentary remark. The Cultivator deserves, and it has long received, more substantial nutriment.

That, among the great number of persons engaged in agricultural pursuits, there should exist differences of opinion respecting the best modes of cultivation, is not surprising. A free interchange of opinions—a willingness to impart, and an equal willingness to receive light—a yielding of prejudices, and a general desire to make substantial improvements in this first and noblest pursuit of man, would however do much towards harmonizing those differences. Perhaps much of this difference may arise from the variety of *manner* in which the same general operation is performed. To illustrate this remark, I will suppose a farmer preparing to plant his corn by manuring in the hill. He lays out his ground in shallow furrows, and deposits in large quantities, and of a coarse and unsuitable quality, the manure, which, at planting, is superficially covered; and the result is a total failure, or at least a light crop. Of course *he* will have nothing to do with *that* method of applying manure to the corn crop. I will suppose again another farmer applies his coarse manure broadcast, mixing it thoroughly with the soil; then furrows to the depth of six inches, in which he distributes about six wagon loads of well rotted, or hog manure to the acre. At planting care is taken that no part of it remains uncovered; thus preventing in a good degree the effects of drouth. Corn thus planted will start off luxuriantly, and usually hold out to the end. The writer has repeatedly received the benefit of such a course. But not to enlarge, for I am aware that your columns are not required to go begging for matter to fill them; and that short articles are more likely to be read than long ones, and are perhaps equally useful.

In conclusion, let the sentiment be uttered, believed, and adopted everywhere, that the farmer's wealth and happiness does not consist so much in his *broad* as in his *well-cultivated* acres.

"A little land, well tilled—
A little house, well filled."

G. BUTLER.

Clinton, N. Y., Dec. 25th, 1845.

SAXON AND SPANISH SHEEP.

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THE idea seems to be held by some, that the Spanish, or what are commonly called Merino sheep, cannot by possibility be made to produce as fine wool as the Saxon. But none will deny that the Saxon were originally derived from the Spanish. What, then, has produced the superior fineness of wool in the former? Obviously, CULTIVATION. And are the Saxons the only people on the face of the earth who possess the ability to effect such a result? Have they such superior skill in the science of breeding and management of animals? Verily, I had supposed that the "self-esteem," (if nothing else,) of the *Anglo* Saxons would not permit them to admit this. JABAL.

SIGNS OF RAIN.

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SOME people desire a weather calendar in their almanacs, fully believing, no doubt, that the weather may be foretold by the phases of the moon. As far better, however, than any prognostications of such a kind, we copy the following, said to have been composed by Dr. JENNER, as an excuse for not accepting the invitation of a friend to make an excursion with him:

1 The hollow winds begin to blow.
2. The clouds look black, the grass is low;
3. The soot falls down, the spaniels sleep,
4. And spiders from their cobwebs peep.
5. Last night the sun went pale to bed,
6. The moon in halos hid her head;
7. The boding shepherd heaves a sigh,
8. For, see a rainbow spans the sky.
9. The walls are damp, the ditches smell,
10. Clos'd is the pink-ey'd pimpernell.
11 Hark! how the chairs and tables crack,
12. Old Betty's joints are on the rack;
13 Loud quack the ducks, the peacocks cry;
14. The distant hills are looking nigh.
15. How restless are the snorting swine,
16. The busy flies disturb the kine;
17. Low o'er the grass the swallow wings;
18. The cricket, too, how sharp he sings;
19. Puss on the hearth with velvet paws,
20. Sits, wiping o'er her whisker'd jaws.
21. Through the clear stream the fishes rise
22. And nimbly catch th' incautious flies;
23 The glow-worms, numerous and bright
24. Illum'd the dewy dell last night.
25. At dusk the squalid toad was seen,
26. Hopping and crawling o'er the green;
27. The whirling wind the dust obeys,
28. And in the rapid eddy plays;
29. The frog has chang'd his yellow vest,
30. And in a russet coat is drest.
31. Though June, the air is cold and still;
32. The mellow blackbird's voice is shrill.
33. My dog, so alter'd in his taste,
34. Quits mutton bones, on grass to feast;
35. And see, yon rooks, how odd their flight,
36. They imitate the gliding kite,
37. And seem precipitate to fall—
38. As if they felt the piercing ball.
39. 'Twill surely rain, I see with sorrow;
40 Our jaunt must be put off to-morrow

INQUIRIES.

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Disease in Fowls.—"A Subscriber"—(St. John, N. B.) The disease you describe, is no doubt what is called roup, or "sore head." As soon as a fowl is discovered to have it, it should be separated from the rest of the flock; the head should be first washed with castile soap suds, and afterwards with a solution of acetate (sugar) of lead. If the fowl is badly attacked before anything is done for it, the surest and best remedy is to *cut off the head.*

Egg Plant—Junius.—Cut the bulb in slices a third of an inch thick; take off the outside skin, pack up the slices one above another, having first scattered fine salt between each layer—put a light weight on the top, and let the whole stand for eight to twelve hours. Then broil the slices on a gridiron, and butter, salt and pepper them to suit the taste. It is a delicious dish.

Bearded and Bald Wheat—A. R., (Middlefield, N. Y.)—We believe it is true that bald wheat is generally less affected with what you call the weevil than bearded.

Potatoes for "Black Soil"—A. R.—If the location is subject to frost, get an early variety—choose hardy kinds at all events.

Cellar for Roots—A. R.—Roots are injured by wilting. The cellar should be as cool as possible without freezing.

Curing Butter—A. R.—We can give no better information on this subject than you will find in our February No., page 49.

Setting Fence Posts—A. R.—See the communication of D. P., in the February No., page 46, current volume.

Sowing Grass Seed—"A Subscriber"—(Cornwell, N. Y.)—We should prefer the latter part of August for sowing grass seed. We would *not* "plow in the seed." A light harrow will bury it quite deep enough. You mention no grass but Timothy. If that is the only kind to be sown, we should sow half a bushel of seed per acre. As to clover, it will do sown at that season of the year, if the land is quite dry and not likely to be thrown up by frost. If, on the contrary it is inclining to be wet and cold, clover will not do very well, sown at any time, but sowing in March, on a light snow, would be preferable,—six to eight pounds of seed per acre. (See vol. 1, N. S., p. 271—vol. 2, p. 187—current vol. p. 94.)

Breeding Mares—R. B. (Watertown N. Y.)—Breeding mares may be kept at moderate and light work for the first five months of gestation. They should not be "turned into the yard to pick with the cattle," nor should they be confined wholly in the stable. They should be allowed an open shed or yard, where they can do as they like, undisturbed. If they are expected to foal before going to grass, they should have plenty of room with litter, and must not be tied. They should have good sweet hay, free from must or dust; or they may be fed with chopped hay and good straw, mixed with shorts, and a little corn and cob or oat meal. It is best not to grain them too highly; carrots or potatoes may be beneficially given in small quantities—say six or eight quarts per day. We should be glad to receive, from some experienced horse-breeder, an article on the best management of young horse stock, from their birth till they are broken and fit for labor. The kind of shelter and description of food best adapted to make the best and most serviceable horses, should be stated.

Multicole Rye—Spurry.—G N., (Hobart N. Y.)—We do not remember to have seen any particular results in regard to the culture of this kind of grain, and cannot refer to any account giving the amount produced in this country, from a given quantity of ground. It has the reputation of being very productive in Europe. *Spurry* is described by Johnson (Farmers' Encyclopedia) as belonging to a genus of herbaceous annual or perennial plants. There are four species, the most common of which is the rough-seeded corn spurry, an annual. This is a common weed on sandy soil in some parts of Scotland. It is devoured greedily by cattle and sheep, and is thought very valuable food for them. A large smooth-seeded variety is cultivated in Flanders. Thaer thinks it the most "nourishing in proportion to its bulk of all forage, and gives the best flavored milk and butter."

A. D. C., (Herriotsville, Pa.,) asks, 1st. "What kind of manure is best to apply to the corn crop in our creek bottoms, where barn-yard manures cannot be had? Soil, heavy loam." [Straw, leaves and turf from the forest, and clover together with plaster and lime, if the latter are found to operate well on that soil.]

2d. "Should lime be mixed with barn-yard manures?" No, it disengages the ammonia, which will escape unless kept down by a covering of vegetable matter.]

3d. "Could tares or millet be profitably cultivated here?" [It is very probable they could—try them.]

4th. "What is the difference between the "Paular" Merino and the common Merino?" [We don't know what kind of Merinos you call "common." Compared with other varieties of Merino, Mr. Youatt says the Paulars "have a more evident enlargement behind the ears, and a greater degree of *throatiness,* and their lambs have a coarse hairy appearance, which is succeeded by excellent wool.]

"Stony Land,"—Lime.—(J. T. R. Kingwood, N. J.)—Stones in land operate as a drainage, to some extent, and attract heat. In some cases they may favor fertility from both those causes. "Sandy land" usually contains but a small portion of lime. To ascertain whether the stones you mention have "lime in them," break them, and apply a few drops of muriatic or nitric acid. If an effervescence is produced, there is lime.

"Is it beneficial to Corn to break the Roots."—A. M. D., (Green Co. Tenn.)—We think not. It is beneficial to stir the ground well, but this should be done mostly in advance of the extension of the corn-roots. As the plant increases in size, we should not work so near the stalks with an implement that runs deep. See an article on the "culture of Indian Corn," in the April No.

ORIGIN AND GROWTH OF FUNGI.

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The common theory is that fungi, and parasitic plants spring from seeds or sporules, which vegetate on bodies that are adapted to their growth. A writer in the *Gardener's Chronicle,* takes a different view of the matter. It reasons thus:—

"In the mineral kingdom we find that metals in crystalizing assume frequently an arborescent form. The same thing may be observed in water crystalizing into frost, on the panes of windows. When a small quantity of paste is allowed to stand for a few days till it begins to undergo decomposition, it becomes covered with a multitude of white fibres or threads shooting upwards into the air, having all the appearance of a vegetable production."

He then goes on to argue that this vegetable-like substance grows up in paste, "even when excluded from the direct action of the atmosphere," although "the previous process of boiling and preparing the paste was sufficient to destroy any ordinary power of germination which a seed or sporule in it might possess." In consideration of these circumstances, therefore, the writer suggests that fungi may originate in accordance with a aw, which, when organized bodies cease to exist in one form are by certain influences impelled into othe forms. To use his own language—"it would appear, that whenever a plant becomes diseased, or its juices unnaturally expelled by atmospheric or other causes, the law now indicated might send up part of these exudations in a shape resembling fungi, and that the new vegetable thus produced, appearing almost at the same instant with the disease which gave birth to it, might, by some, be considered as a new being arising from a seed or sporule, instead of its being merely an extension of the existing vegetable in a new form."

CONDENSED CORRESPONDENCE.

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FARMING IN OHIO.

A subscriber at Williamsfield, Ashtabula county, Ohio, gives us an account of the farm of J. Kennedy, of Wayne. Mr. K. is said to be a Scotchman, and is now settled on a farm of one hundred and seventy acres, improved as a dairy farm.

"In company with two friends, I called on Mr. K. on a fine morning some two weeks since, and found him with his sons clearing out his sugar bush, (as we term a collection of maple trees,) from which he manufactured nearly one thousand pounds of sugar the past season. With a true Highland welcome, Mr. K. met us, and took us over his grounds, showing us his flocks of sheep, mostly Merinos, of good size, and in fine condition; among them he has some half dozen South Downs, purchased from the Germans at Economy, Pa. We visited the barn and sheds, and saw the sheep quarters, which are very convenient, and show Mr. K.'s regard for these valuable animals. We looked into his shop for all work, where his boys find plenty to do on stormy days. He has, what every farmer should have, a set of carpenter's tools, but as the carpenters and wheelwrights live so near, many seem to think they do not need them. The corn house and piggery were next visited, which are kept very clean.

Mr. K. takes great pleasure in domesticating his stock, while most sheep, pigs, and cattle, run at the presence of their master, his wait his accustomed recognition, and express their grateful sense of their master's regard. Although it was winter, a time for broken fences, and such like marks of neglect, Mr. K.'s garden was so neat and free from these incumbrances that it was a pleasure to visit it.

His fruit trees are well cared for, being often cleansed in the summer season with soap-suds. One of my friends noticing the polished bark of an English cherry tree, asked me if that was its natural color? I replied yes; brought out with good care. We passed through a meadow which a few years since abounded with stumps. Mr. K. being a great enemy of these, has cleared the field of them. His orchard, too, is in good keeping with the other grounds—not a limb, broken rail, or any such thing to mar the beauty of its clean sod.

On entering the house, we found Mr. K. provided with abundant resources for his leisure hours, in his books and objects of natural history. Here, with his family, he passes the winter evenings, too frequently passed by the younger members of other families at the store, or other places of resort. We left Mr. K. highly gratified with our visit, wishing that we might see many following the good example he sets them."

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CIDER MILLS AND CIDER.

A correspondent of Erie county, Ohio, says—"I should be glad to see in the columns of the Cultivator a plan and description of a cider-mill, considered by you to be best adapted for the purpose; likewise the best method to pursue in making cider, so that it will retain its flavor for years, and also what kind of apples are generally considered to be the best for making cider. The mills in use about here are composed of two or three wooden nuts, which grind fruit very imperfectly, and the cider generally in the course of a few weeks turns hard, and becomes unpalatable."

We should be glad to receive communications in relation to the above. In the meantime would refer to our volume for 1844, page 302, for a mode of manufacturing good cider.

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HEAVES IN HORSES.

A correspondent says, after trying various modes, he has found the following the best treatment for horses having the heaves, viz:—To feed *no* hay, but plenty of *bright*, whole (or uncut) straw, with all the oats they would eat, (the latter soaked in cold water three or four hours,) with a pint of oil-meal [flax seed] daily. On this feed they have worked well, and were troubled but little with the disease."

THE SEASON IN ALABAMA.

Extract from a letter written by A. McDonald, Esq., Ala, dated April 24th, last.

"Thus far the spring cannot be said to be favorable in this section. The large quantity of rain that has fallen during the present month, followed by a continuation of cold weather, has prevented the cotton from coming up well. Upon the whole the stand is a very bad one. Indeed the month of April is a complete antipode to April of 1845; for while we had no rain last year during that month, we have the present year been literally drowned. Either extreme is unfortunate for the farmer. Vegetation is some 10 days later the present than last year. We had green peas on our table last year on the 20th of March; this year on the 1st April. It is however too early to begin to predict as to the crop of 1846, only so far as it is always known that the industrious, prudent, and intelligent farmer will always succeed."

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THE SEASON IN MISSISSIPPI.

Extract from a letter written by A. M. Mayo, of Richland, Holmes county, Mississippi, dated April 23:—We have now radishes, mustard, onions, peas, &c., for our table, and as for roses we have only 15 varieties, the greater part in full bloom. The jasmine and woodbine look lovely."

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SIDE HILL DITCHING.

A "Delaware Subscriber" wishes some further explanations respecting the level system of ditching or plowing, as practised on the plantation of Captain Eggleston, of Mississippi. He says—"I wish to understand how the rows of corn can be parallel when following the undulations of hill-sides, where the slope is irregular. Again, when you come to the fence, at the head or at the foot of a field, there must be many broken rows. Having on my farm several side-hills subject to be washed, I have for some years adopted a plan of ditching somewhat similar to that of Capt. E.; but owing to the defect of parallelism of the ditches, I make my corn rows straight and parallel to one of the fences. This mode, although it answers a good purpose, requires lifting the cultivator over the ditches wherever they cross the rows. It also requires the clearing of the ditches every time, after the corn is worked." We should feel obliged for any information in reference to this subject.

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PRESERVATION OF POTATOES.

A correspondent at New-York, who signs "Germanicus," has been so kind as to forward us the following extract, which he translated from a German publication, on the subject of the potato disease.

"Take 3 large tubs, place them near to each other, and fill them with cold water. In the first tub leave the water pure. In the second put one lb. of *chloride of lime* to each 12 to 13 galls. of water, and in the 3d one lb. of soda to each 12 to 13 galls. of water. Then wash the potatoes perfectly clean (the diseased and sound ones together) in the first tub; then put them for one half hour, in the 2d tub, in which is the dissolved chloride of lime; from that, put them in the 3d tub, in which is the solution of soda; where, after leaving them 20 minutes, they must be taken out, and washed in fresh cold water, and then dried in the air."

In reference to the above, our correspondent observes:

"Although I am well aware that for a farmer who cultivates large quantities of potatoes, this process will be hardly possible; yet by them it can also be employed for the seed potatoes, as they are perfectly safe, so that even where the potatoes, so prepared, are put in the same cellar with other diseased potatoes, they will not rot, and it would also be for the poorer classes who cultivate enough only for their own use.

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MUCK AS A FERTILIZER.

A correspondent at Castleton, Vt., says:—"For the last ten years I have had some experience with swamp muck as a fertilizer. For meadows, used in the f of a top dressing, it is almost valueless as a manure in its crude state, but a good and enduring manure when combined with certain salts. It is the cheapest material that a farmer can make manure from when he has it on his own farm. By a top dressing in the crude state and one dollar's worth of salts to the acre, (?) I have made land yield two tons of hay to the acre, that did not yield five hundred before. One dressing of the muck will last several years; the other articles it wants yearly. I use it in the barn-yard as an underlay to catch the salts of yard manure, which I use for hoed crops." What kind of "salts" are used, and how?—Ed.

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AGRICULTURE IN GEORGIA.

Extract from a letter of A. E. Ernest, of Bibb Co., Georgia:—

Turneps.—"For six or seven years I have cultivated turneps for stock and for market, and they are, we think, a very profitable crop, if cultivated in a proper manner. Last Monday I sent a turnep to Macon, that when first pulled up and washed, weighed 18¾ lbs., and the season was bad for turneps and everything else; and besides that, I commenced pulling up the largest and sending them to market as soon as they were large enough. Had it not been for this, it is likely there would have been larger ones in the patch. The turnep crop can no doubt be made as profitable in Georgia as it can anywhere. We are not under the necessity here of housing our turneps in the winter; we leave them in the patch until we want them for use, and some of the varieties grow almost till spring."

Silk.—"For some years past I have been cultivating silk, and notwithstanding I have carried on the business under almost every conceivable disadvantage, yet I have made the business profitable—perhaps more so than any thing I have done. This, I think, is saying a good deal in favor of the business, and it is certainly true to the letter; and my prospects in the business are now extremely flattering, and in the course of the present year I may be able to give you something on the subject beneficial to some of your Georgia readers."

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PINE STUMPS.

Mr. Samuel Warring, of Morrisdale, Pa., states that he is in the habit of burning out pine stumps. He digs the earth away from the roots, taking care to go as deep as the plow will reach. After the roots were made bare, he made a log-heap around the stump, and he says, "if the weather is suitable, the fire makes clear work of it in a few hours." He states that he last year cleared a field in this way, which was thickly studded with pine stumps and old pine trees. He did the work by "odd jobs," as his labors could be spared from other farm work. The field was so clear by the 10th of September, that its contrast with other lots induced the inquiry how long it had been cleared. He thinks the mode a good one for those who cannot conveniently obtain machinery.

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PREJUDICE AND ITS CONSEQUENCE.

Mr. Geo. Adams, of Attica, Wyoming Co., N. Y., gives the following remarks in reference to agriculture in that section:—

It is deplorable to see men who consider themselves first rate farmers, so blinded to their own interest and prosperity by prejudice, and a superstitious fondness for their old notions as to ridicule those who are trying to make improvements. I hardly know how to get along with such men, but have come to the conclusion that the best course to do away prejudice and introduce a better system of farming is to push forward and make all the improvements we can, and show them by our example that we can make greater crops and more money by our improved system of husbandry than they can by their skinning system; taking crop after crop without returning anything to the land to keep up its fertility. It may be said that I am judging my brother farmers too hard, but by their works they must be judged. I can refer to a number of farmers with whom I am well acquainted, who boast of their skill in farming, that have cropped certain portions of their farms without returning anything near an equivalent for what they have taken from them, till the crops will hardly pay the expense of making them. There are a good many farms in this section, which, when new, would have produced fifty bushels of corn or twenty of wheat per acre, that are so reduced by severe cropping that the average yield is not more than twenty bushels of corn, and about ten of wheat. Now my own observation has convinced me that the manure wasted on these farms by laying exposed to the weather and washed by rains and snows, and carried off through gutters into low, wet places, and the highways, would, if properly saved and judiciously applied, be sufficient to manure a considerable portion of them, and yet these men complain that they have not the means of manuring their farms."

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BLIND TEETH IN HORSES.

Wm. Little, Poland, O., relates a case of a stallion of his having gone entirely blind without any apparent cause. A friend who examined him, found "blind or wolf teeth," which were immediately knocked out, and the horse soon recovered his sight.

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TO CURE GALLS IN HORSES.

W. B. Hamilton, of Philadelphia, says—"Some twenty-five years since, an old stage driver told me the secret why, to the astonishment and envy of every other Jehu, his horses were never galled. Myself and friends have tested it again and again. Here it is. Gather a quantity of smart weed *(aqua piper)* which grows in almost every wet spot about the stable; bruise it well, and put it in an iron vessel, in a corner of the stable; cover it up with chamberley and wash the galled places whenever the horse enters or leaves the stable, or oftener, if occasion offers, and then the cure is almost immediate. If badly galled under, the harness or collar, bruise well some of the leaves and bind on the spot. To prevent galling, let the shoulders and parts exposed, be washed daily with the infusion, and the animal will not gall, work him as hard as you will, provided the harness be good."

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SALTPETRE FOR MEAT.

Chas. Babcock, of Guilford, Ct., writes, in reference to a communication on curing meat, by N. Darling in our Jan. number:—"I find by consulting medical writers that saltpetre is a deadly poison." In support of this he cites the following. "This powerful salt, when inadvertantly taken in too large doses, is one of the most fatal poisons."—(Thatcher's Dispensatory.) "In large doses, such as an ounce taken at one time, it produces the most dreadful symptoms—constant vomiting, purging, (the discharges mixed with blood) convulsions and death." (Cox's Dispensatory, p. 445.) "I have found by a series of experiments for many years, that saltpetre has the most certain and deadly effect upon the human system of any thing that is used in medicine." (Dr. Thomson's New Guide to Health.)

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MARTHA'S VINEYARD.

Allen Coffin, Esq., of Edgartown, writes in relation to the state of agriculture and horticulture on this island:—If some of our farmers would take the Albany Cultivator, or some other interesting horticultural publication, and follow the directions given, I doubt not it would be better to them than $100 per year. The skinning system has been practised here to perfection. It is a true saying, "starve the land, and the land will starve you. Feed the land, and the land will feed you." Our people begin to feel the importance of manuring their land, and are beginning to set out fruit trees. I began to set out trees 13 or 14 years ago, and was laughed at, but they now know that with judicious culture, we can raise good fruit. Last season, I think there was nearly as much money laid out for fruit trees, as there has been since the island was first inhabited by the white man.

Of the advantage of sea weed for trees, Mr. Coffin says—"I have always kept a good coat of sea weed around my trees which keeps the frost from injuring the roots which run nearest the surface of the ground. It kills nearly all the weeds, keeps the ground loose, and as it decays, enriches the land. The roots of my trees have completely intersected each other, and many of the roots were near the top of the ground, so that it would, in my opinion, be very injurious to plow amongst them. Once a year I run a spade two or three inches under the surface and turn it over, so that the grass and weeds serve to enrich the land."

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IMPOSITION.

A. D. COULTER, Herriotsville, Pa. after mentioning a case of one of his friends having been imposed on in what was called a Cotswold ram, says—"Our farmers here are often imposed upon in cattle and sheep, by designing persons. I have been to see several herds of *Durhams* this winter, but the greater number had no mark by which I could trace any Durham blood in them. This might be easily avoided if the farmers would take a good agricultural paper. For no one can examine the portraits of the noble animals which we find in the Cultivator, without being convinced that three-fourths of the cattle purchased by our farmers for Durhams, have nothing but the name."

LAYING DOWN GRASS LANDS.

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MR. EDITOR.—As the time has now arrived when something can be learned in farming as well as in every thing else, and it is not considered advisable to follow altogether in the footsteps of our predecessors, I will state that a practice is gaining ground with us of sowing grass seed alone in September and October for meadow. The mode is to prepare the ground exactly as if for wheat, and then after harrowing thoroughly both ways sow the seed; it falls in the small furrows made by the harrow teeth and the roller following covers it sufficiently deep. The advantage is a hay crop instead of a crop of wheat, the hay being worth more than the wheat, even supposing the wheat to be a tolerably fair crop, which has not been the case of late years with us. Another advantage is, that you get rid of an exhausting crop, for I believe that a heavy crop of wheat straw, standing upon the ground and being permitted to ripen its seed, exhausts the soil more than a hay crop would in several years. It is the opinion of some intelligent farmers, that if ground in good heart be laid down to grass without a grain crop, and the after growth be not pastured off or mowed, but permitted to grow, and die, the standard of the soil will not be materially lowered even for a length of time. It is by constant ploughing and sowing and reaping and not making a due return to the soil in the shape of manure and other fertilizing matters, that some of our best land has been reduced from a state of fertility to almost barrenness. The past season has been one of almost unparalleled severity on this Island. The drought which commenced in the beginning of May, and may be said to have lasted till October, together with the ravages of the grub worm, seemed to defy the energy of the farmer, and render futile all attempts to get even a moderate return for his labor. In proof of this, I state my own experience in the cultivation of three acres of potatoes. About one acre was sod, the remainder ground on which cabbages had grown the year before, all ploughed the first week in March, being a deep rich soil, inclining to clay. The drills were opened three feet and a half apart, and the potatoes being cut, bearing not more than three eyes in a piece, were set nine inches apart. The planting was performed between the 20th of March and the 0th of April. The manure a compost of stable, barnyard and hog-pen, about equal parts, and applied at the rate of thirty five ox-cart loads to the acre in the drills, and in a partial state of fermentation. The potatoes came up and grew finely, but owing to the dry weather the vines were entirely dead by the middle of July, giving a yield of not over seventy five bushels to the acre. The damage done by the grub-worm has also been more serious than ever before known, and it is feared may extend to another season, inasmuch as on many fields they have eaten the roots of the grass entirely off, and of course there will be nothing but what may grow spontaneously another year. In September last, I saw some of our finest grass farms in New-Durp which looked as if a fire had passed over them; nothing visible but the dead stubble, and here and there a green stem of a daisy which the grub in his fastiduousness had left standing in bold relief to the destruction around.

On many of these farms the plan has been adopted of turning under the grass stubble shortly after harvest, giving a dressing of short fermented manure and seeding anew with timothy at the rate of half a bushel or three pecks to the acre, which, by-the-by, I conceive to be sufficient, although Mr Pel uses more. On land thus treated the seed came up well and looked promisingly in the fall, and I anticipate a good yield next harvest unless the young grass roots should suffer for want of rain in April and May, which is a critical time for them.

Having seen in your paper for January a singular cause of death of a cow, I am induced to give an account of a cow of mine which died under circumstances which lead me to believe that death was produced from the same cause. This cow had failed getting with calf for the last two years, although constantly in company with a bull. Nothing was observed indicating a loss of health except a redness about the outer rim of the eye, which made its appearance about three months before her death until going into her pen on the morning before she died, she was found to be very much swollen, her stomach distended, and with symptoms of inflammation. She died next day. Upon examination the uterus was found to contain a large quantity of decomposed matter supposed by those who saw it to be the remains of a calf. She fed regularly and gave milk up to the time of her death. G.

Southfield, Richmond County.

INDIAN CORN

IN regard to the culture of this article by the Iroquois, or Six Nations, there are some interesting obseervations in Mr. Schoolcraft's Report. "It is," he says, "conceded on all hands that this is a tropical, or at least, a southern plant." He remarks that it was not known in Europe before the discovery of this country, and that we learned the mode of cultivation from the Indians, and not they from us. "It was, he says, "cultivated by the Iroquois in large fields, and gave them a title to agriculturists.' It was undoubtedly highly prized as an essential article of their support. Mr. Schoolcraft states that the warriors of the Six Nations were in the habit of undertaking journeys of thousands of miles in extent, carrying no other food than a little meal from parched and pounded corn, relying on the forest for meat. "One table-spoonful of this meal," says Mr. S. "mixed with a little sugar and water, will sustain a warrior for twenty-four hours, without meat." What grain would do more? The art of converting the sap of the maple into sugar, it seems, was known to the Indians before their acquaintance with the whites.

Mr. Schoolcraft states also that the Iriquois cultivated an indigenous kind of bean, which he thinks may have been the same called *frijoles* by the early Spaniards." They had likewise, according to Mr. S., "some species of the cucurbitæ" pumpkins and squashes.

MANURE FROM BATS.

A writer in the *Gardener's Chronicle*, states that in the churches belonging to the "ruined missions," near San Antonio, Texas, numbers of small bats build their nests. He states that in one of those churches at La Concepcion, which he visited in 843 and 1844, there were countless numbers of nests, and that he "observed a large quantity of bat's dung, covering the whole of the bottom of the church, in some places a foot to a foot and a half thick, and the stench arising therefrom, intolerable." He adds, "were manure necessary for the lands on the San Antonio, this bat guano might be of service."

THE CULTIVATOR.

ALBANY, JUNE, 1846.

NEW MAGAZINE.

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The rapid strides which have been made within the few last years, in the advance of a taste for rural improvement in all its branches, seem to demand a periodical in which can be concentrated an account of its progress, together with such directions as may guide, in some degree, the practice of the large and increasing number engaged in rural pursuits, either as a matter of taste or profit. The publisher of "The Cultivator" believes he has succeeded in making such arrangements as will supply this desideratum; and he has the pleasure of announcing that he has secured the services of A. J. DOWNING, Esq., whose writings on Landscape Gardening, Rural Architecture, Pomology, and Horticulture generally, have given him a rank among the first writers of the age, on these subjects, as Editor of a new magazine, the publication of which will be commenced on the first of next month, under the title of

THE HORTICULTURIST,

AND

JOURNAL OF RURAL ART AND RURAL TASTE.

BY A. J. DOWNING,

Author of "Landscape Gardening," "Designs for Cottage Residences," "Fruits and Fruit Trees of America," etc. etc.

THIS magazine will be devoted mainly to Horticulture. Gardening, in a thoroughly *practical* as well as scientific sense, will be its leading object; and it is hoped, through its columns, not only to render simple and easy to the novice, the practical care of all that belongs to the garden, but also to disseminate in all parts of the country, a knowledge of all new and important discoveries in Horticulture.

POMOLOGY—the description and cultivation of Fruits and Fruit Trees, in which we are already more interested than any other people—will be a topic continually discussed. Essays, hints, and designs on Ornamental or

LANDSCAPE GARDENING,

Will be frequently presented to its readers. The great interest manifested at this moment in many of the states, in the embellishment of grounds and the erection of ornamental dwellings, points out the necessity of some periodical in which these subjects shall be more completely illustrated from time to time. Rural Architecture,—so closely allied in its nature,—will therefore be embodied in the plan of this work, and,

DESIGNS FOR RURAL COTTAGES AND VILLAS,

Farm-Houses, Gates, Lodges, Hot-Houses, Vineries, &c. &c., will very frequently be introduced into its pages.

Numerous correspondents, from among those of ability in the country, will place before its readers a variety of articles on all the most interesting subjects within its scope. A summary of Horticultural news from the leading horticultural journals in England, France, and Germany, will be given monthly, as well as notices of all the more important proceedings of the principal Horticultural Societies in this country.

In short, this periodical may be considered a continuation of the various works on rural subjects, by its editor, which have already been so favorably received by the public. It is now his object to assist, as far as possible, in giving additional impulse to the progress of Horticulture and the tasteful in Rural Life, subjects which are now so largely occupying all those interested in country life.

THE HORTICULTURIST will be issued on the first of each month, (commencing July, 1846,) in numbers of 48 pages, printed on fine paper, and embellished with numerous engravings, illustrative of the various subjects to which it is devoted, making an annual volume of about 600 pages, at $3,00 a year, payable in advance.

Published by LUTHER TUCKER, at the office of "THE CULTIVATOR," Albany, N. Y., to whom all business letters should be addressed Letters and Communications for the Editor, should be addressed to A. J. DOWNING, Ed. Horticulturist, Newburgh, N. Y.

Albany, May, 1846.

TO CORRESPONDENTS.

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COMMUNICATIONS have been received during the past month, from Alex. M'Donald, M. W. Phillips, A Subscriber, Practice with Science. D. H. Wright, E. W. Hale, A Young Farmer, Jubal, James Morrison.

S. W., Morrisdale, and G. W. C., Mt. Lion.—The seeds requested were forwarded as desired.

P. D. C., Pleasant Plains.—Shall be glad to receive an account of your experiments with lime and muck.

BOOKS, PAMPHLETS, &c., received as follows:

The Cultivation of the Grape, and Manufacture of Wine. Also, Character and Habits of the Strawberry Plant, by N. Longworth, Cincinnati; 20 pages, octavo.

American Journal of Insanity, edited by the officers of the New-York State Lunatic Asylum, for April, 1846. Utica, Bennet, Backus & Hawley—quarterly, 95 pages,—$1 a year.

Capital Punishment, a violation of the principles of Divine Government. By Milo D. Codding, Rochester, —44 pages.

Speech of Hon. T. H. Bayly of Virginia, on the Harbor Bill and Corn Trade of England, in the House of Representatives, March 11, 1846.

Cortland Co. Whig, containing Address of Mr. Amos Rice. From P. Barber, Esq.

Treatise on the Potato Disease, by Thos. Cross.

The American Journal of Science and Arts, for May; New-Haven, Ct. By Prof. Silliman, Jr., and James D. Dana. Published every second month—$5 a year.

Speech of the Hon. R. D. Owen, on the bill to establish the Smithsonian Institution.

Premium List of Jefferson Co. Ag. Society, from Maj. E. Kirby.

Premium List of Madison Co. Ag. Society.

The Diploma of the New-Haven Co. (Ct.) Ag. Society, from Levi Durant.

The Phonographic Class-Book, Reader, &c., from Andrews and Boyle, publishers, Boston.

MONTHLY NOTICES.

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☞ We invite the attention of those wishing a delightful country residence, to the advertisement for the sale of the farm of the late Dr. SAMUEL AKERLY, on Staten Island. Dr. A. was well known to the readers of the Cultivator, as a most careful and thorough farmer, by his various contributions to its pages under the signatures of "Richmond," and "A Practical Farmer."

IMPORTATION OF SHEEP.—We learn that Mr. S. W. JEWETT, of Weybridge, Vt., has lately imported ten yearling ewes from the Merino flock of the late Lord Western, of Felix Hall, England. The origin of this noted flock was forty ewes selected by Lord W., from five hundred which were presented to King George III, by the Spanish Cortes, about the year 1808. We have frequently seen favorable notices of Lord Western's flock in the English agricultural books and periodicals. The Merinos are said to have been much improved in his hands—the original fineness of wool having been preserved and considerable added to the weight of the fleece. From a statement published in 1839, it appears that the year previous, 315 breeding ewes of this flock gave an average of 4 lbs. 10 oz., and 122 yearling ewes an average of 6 lbs. 1 oz. of wool per head, "washed clean on the sheep's back."

We have not seen Mr. Jewett's imported sheep, but from the reputation of the flock from which they were taken, we think there is no doubt that they will prove valuable to the country.

☞ Several of the newspapers have mentioned the mysterious disappearance of Benj. P. Johnson, Esq., ex-president of the New-York State Agricultural Society. He left home on business at Newburgh and New-York, about the first of April; but no intelligence has been received concerning him since his arrival at the city of New-York, and but little doubt is now entertained that some fatal catastrophe has befallen him. He had long maintained the character of an upright and honorable man, and had filled with credit to himself and satisfaction to the public, several important situations of trust. There was a report, some time since, that his body had been found in the river at New-York, but such was not the case; and we have great reason to fear, so long a period has now elapsed, that his fate, like that of the late Chancellor Lansing, who was seen in New-York for the last time some years since, will never be disclosed.

Apples without Blossoms.—E. Haxtun, Esq., member of Assembly from Dutchess county, informed us a short time since that an appletree was standing on his father's farm in Beekman, which, without ever having had a blossom on it, produced apples! At the time the other trees in the vicinity of this tree were in blossom, Mr. Haxtun took some twigs from the one we have mentioned, which he has kindly left with us. On examination, we find the petals of the flower only wanting—the fructifying organs, (stamens and pistils,) seem as well developed as in ordinary blossoms. The deficiency spoken of, gives to the tree the appearance of being destitute of blossoms. We have never before known a defect of this kind in an apple tree, though we cannot say that it would necessarily affect the production of fruit. Mr. Haxtun stated that the tree bears quite regularly; that the fruit, which ripens in the fall, is good.

Propagating Oysters.—Mr. J. D. Jones, of North Carolina, wishes some information in relation to this subject, and to his request we also join our own. Will not some of our friends favor us with an article describing the best mode of producing this animal, which though reckoned low in the scale of *being*, is deservedly ranked high in the scale of *esculents*.

Prospects of the Wheat Crop.—Accounts from nearly all parts of the country represent the wheat crop as very promising. In the best wheat districts of Ohio, Illinois, Wisconsin and Michigan, the only fear in regard to it is said to be its great rankness, in some cases, which may be followed by rust. We have heard of but little injury from the fly, but a letter received from Thos. Hancock, dated Burlington, N. J., May 18th, states that considerable danger had been done by the insect in that neighborhood.

"The last of the Mohecans."—We learn that the horse *Bulrush* or *Chelsea Morgan*, the last of the progeny of the first or "Old Morgan" horse, is dead. This animal which has several times been mentioned in the Cultivator, belonged to Mr. Frederick A. Wier, of Walpole, N. H., who it will be recollected, has furnished many valuable facts in regard to the origin and history of the Morgan race of horses. The *Chelsea Morgan* was foaled in 1816, consequently was thirty years old at the time of his death For the benefit of the public we will mention that Mr. Wier has supplied the place of the horse whose death is here mentioned, with one of the Morgan family, called the *Gifford* horse, a son of the celebrated *Woodbury* Morgan. We are informed that persons who recollect the old Morgan horse, (particularly Justin Morgan Esq. of Woodstock, Vt.) consider the *Gifford* horse to resemble him more closely in shape and character than any of that stock they have seen. The last named horse has stood for the last fifteen years mostly in Bethel, Vt., in which vicinity, and in all places where known, his progeny are held in high repute as roadsters.

Profitable Hens.—Charles W. Greene, of Roxbury, Mass., from 45 hens, had 41 dozen eggs, in January last, and 26½ dozen the first 16 days of February. He keeps his hens warm in a well lighted house, facing the south, the front being made of glass, like a green-house. The eggs sold for 30 to 38 cents per dozen.

Black and white Paints.—Tools, wagons, &c. painted black, absorb the sun's rays, become hot, and warp and crack. Painted white they reflect, and do not absorb the rays, and consequently do not become hot, and they remain uninjured by warping. Hence all wooden articles should be painted of some light color.

To stop a runaway horse.—If on horseback, throw your bridle reins round his neck if possible, to choke him, o r choke him with your arms, and he must stop. If in a wagon, and running away is feared, provide a strong cord with a sliding-noose placed round his neck; if he runs, draw the cord forcibly; he is choked and stops instantly.

Potatoes.—"The long red wants a long summer, and when it is fully ripe it takes the lead among good potatoes."—*Mass. Ploughman.*

This agrees with our experience. The potato alluded to is variously named, La Plata red, Spanish, or Merino, long red, &c. It came to this country some forty years since, from the river La Plata, in South America. It is the hardiest potato we ever knew—has the greatest constitutional stamina, and will beat the once boasted *Rohan* in productiveness, as we have several times proved by planting them side by side; giving an equal quantity of ground to each. Animals, from rats to cattle, are more fond of it than of any other kind. Plant it only in warm loamy (not sandy or gravelly) soil, so that it may get *fully ripe*, and from March to July there is no potato superior to it for the table.

Milk of Carnivora.—The French chemist Dumas, has been engaged lately in chemical examinations of the milk of carnivorous animals. He fed dogs wholly on flesh, and on subjecting their milk to analysis, ascertained that no sugar was present, nor could a trace of butyric acid be detected after the dogs had been thus fed for fifteen days. But if the dogs were fed on farinaceous food, sugar as well as butyric acid was found.

Productive Cows.—Henry Creesy took the first premium of the Essex Co. (Mass.) Ag. Society for a "native" cow, which from the 21st of May to 21st September, gave 4,817 lbs. 4 oz. of milk; 19 lbs. of milk was ascertained by trial to yield on an average one lb. of butter, which makes the milk equivalent to 253 lbs. of butter for the four months. Her keeping is stated to have been grass-feed, with the exception of seven weeks, when she had two quarts of shorts per day.

Wm. Averill took the second premium at the same time, for a "native" cow which in four months, from 20th May, 1845, gave 4,375 lbs. milk, which milk yielded by actual manufacture, 211 lbs. 2 oz. butter. Her keeping was grass-feed with the addition, during the drouth and shortness of feed, for five or six weeks of one quart of Indian meal and one quart of rye-meal, mixed together, per day.

GOOD PIGS.

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A correspondent of the English Agricultural Gazette, gives the weight of three pigs of one litter, a cross between sows of the large Tamworth breed, and a boar of Lord Howe's swell breed. One of them, killed at seven months old, weighed 240 pounds; another killed at eight months, 260 pounds; and a third, fattened by a cottager killed at eight months and a few days old, weighed 376 pounds.

AGRICULTURAL SOCIETIES.

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New-York State.—The meeting of the Executive Committee for last month, was held at Auburn, on the 14th. We were unable to be present, but learn that there was a good attendance of the members, and that a spirit was manifested which promises well for the next exhibition. The judges, to award the premiums, were appointed, and the arrangements necessary for the Fair made, so far as they could be at this early day.

Madison County.—The Agricultural Society of this county holds its next Fair at the village of Eaton, on the 22d and 23d days of September next. We perceive by their bills, that the Society offers, in premiums, no less than *thirty-six* copies of the Cultivator for 1847.

Jefferson County.—The Fair of the Jefferson Co. Ag. Society, is also to be holden on the 22d and 23d of September. Address to be delivered by J. B. Nott. This society offers *ten* volumes of the Cultivator in premiums.

Dutchess Co.—Fair to be held at Washington Hollow, 7th and 8th of October.

Montgomery Co.—Fair to be held at Amsterdam in October.

Litchfield Co. Ct.—Exhibition at Litchfield, September 23, and 24.

Windsor County, Vt.—First Fair to be held at Woodstock, Oct. 1.

NEW PUBLICATIONS.

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Transactions of the N. Y. State Agricultural Society for 1845.—This volume, being the fifth issued by the Society, contains an unusual number of valuable articles. Such in particular are the Prize Essays on Science and Agriculture, Irrigation, Culture and Manufacture of Silk, Rot in Potatoes; also the Report of the Committee on Farms, with statements of the Competitors, an article on Farm-Houses, the Agricultural Statistics of the State, and an Essay on the Potato Disease in Scotland, by John P. Norton. Two of these articles,—viz: the one on Farm Houses, by A. J. Downing, and the summary of the statistics, by S. S. Randall,—we copy into this number, believing that the readers of the Cultivator will be pleased to peruse them.

American Journal of Science and Art.—We have received the number of this excellent periodical for May. It contains, as usual, many interesting original articles on various subjects, besides several pages of miscellaneous scientific intelligence. Conducted by Professor Silliman, B. Silliman, Jr., James D. Dana. Terms, $5 per annum—published every second month, at New-Haven.

Quarterly Journal of Agriculture and Science.—We have received the number for April, May, and June. Among other valuable articles, we notice particularly, one on the Agricultural Geology of Onondaga county, by Professor Emmons—one on the spontaneous changes which Organised Matter undergoes when exposed to the action of Chemical and Physical Forces, by the same author—structure of Granite Mountains—Notes on Natural History, &c.

WASTE LAND IN IRELAND.

……

The idea seems quite prevalent in this country that the miseries of the Irish population, are owing to the number of inhabitants being too great for the extent of territory. From the statistical returns, it appears that the population of Ireland is not now as great in proportion to the means of subsistence, or the production of food, as it was at the commencement of the present century. Improvements in agriculture have made very considerable progress on that Island within a few years; many acres of waste land have been reclaimed, and the production of other lands increased. But there is still a large quantity of waste land which is susceptible of cultivation—not less, according to the government reports, than 5,000,000 acres.

Some years since, an association was formed under the name of the Irish Waste Land Improvement Society. From a notice of the fourth report of this society, which we find in the English *Agricultural Gazette*, it appears that several thousand acres of these lands have been brought into cultivation under the auspices of this society, and now furnish support to three thousand inhabitants. "They are now," says the account "pursuing their wonted avocations in order and peace, in the midst of the distress and consequent recklessness prevalent around them, with employment secured to them during the approaching trying season, and with every prospect of a supply of wholesome food for their support until the coming harvest."

If the Irish population could be employed and supported in bringing into cultivation their waste and unproductive lands, not only would their present miseries be alleviated, but an effectual safeguard would be provided against future scarcity and suffering. To this end, therefore, the Society mentioned is directing its efforts, and so far with very encouraging success and favorable prospects. Parliament has moved in the case, and has removed the principal legal difficulties which have heretofore obstructed improvement; so that in the language of the editor of the Agricultural Gazette, "it appears that there is hardly any country where the investment of capital in farming should pay so well as in Ireland."

REARING CALVES.

……

Mr. Buckminster, the editor of the *Massachusetts Plowman* thinks—" a cow that makes a fat calf, must be presumed to give richer milk than a cow which makes a lean calf." A correspondent of the Plowman, Lovett Peters, Esq., of Westboro, Mass., disagrees with the editor. Mr. P. says—" As a general rule, it is no evidence that a cow which makes a fat calf is a good one for butter. Some of the best cows I ever owned never made fat calves; and those which gave poor milk for butter, if enough of it, made fat calves. It has been uniformly so."

In reference to the above, we would remark that the experience of several years, both in rearing and fattening calves for veal, has induced us to form nearly the same conclusions as Mr. Peters seems to have arrived at. Our best cows for butter have not made as fat calves at from four to six weeks old, as some whose milk was less rich. The reason probably is, that a large proportion of oleaginous matter is not adapted to the digestive organs of the calf at that early age. The milk of cows which are not so good for butter, may contain more *caseine*, or the substance of which cheese is formed, and as this is a nitrogenized substance, chemistry would teach that it would more tend to develope the muscular tissues. This may account in part for the more rapid *growth* of calves fed on such milk; though we have not only found them to grow better, but to be actually fatter at the age we have mentioned, than when fed on milk which was very rich in oil.

Selecting cows which give rich milk.—In the communication of Mr. Peters abovementioned, he observes that he has discovered "a certain something which is a sure indication of the quality of the milk a cow will give. He says—"I am so certain of this, that I venture to assert that, I can go into a stock of ten cows, when they are in milk, and if there is one in the lot which gives richer milk than any other, I can find her, and without milking her. And so if any one gives poorer milk than any other. I suppose you will say this is all imagination, but depend on it, it is not so."

Query.—Has this " certain something " which indicates the quality of the milk anything to do with the direction in which the hair grows?

Diarrhœa in Calves.—Two table-spoonsful of ground allspice, in three gills of boiling water, given once in two hours, will speedily effect a cure.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, May 19, 1846.

COTTON—New Orleans and Mobile per lb., 6¼a10½c.—Upland 6¾a9 cts.

BUTTER—Goshen, per lb., 15a20c.—Dairy, 11a12½—Store, 7a9

CHEESE—Per lb., 7½a8½c.

FLOUR—Genesee, per bbl., $4 62a$4.75—Ohio, via. canal, $4.56a$4.46—Michigan, $4.50a$4.62—Orleans, $4.31a$4 37.

GRAIN—Wheat, Genesee, per bushel, $1.06a$1.12½—Illinois, 90a96 cts.—Rye, per 56 lbs., 62a68c.—Corn, per 56 lbs., 62a68c.—Barley, 62a64—Oats, 44a45c

HEMP—Russia, clean, per ton, $210—American water-rotted, $130a$180—dew-rotted, $80a$100—Manilla $138a$140.

HAMS—per lb., 7a8 cts.

BEEF—Mess, per bbl., $7.50a$8.25—Prime, $5.00a$5.50—Smoked beef, per lb., 6a6½ cts.

LARD—6¾a7¼c. per lb.

PORK—Mess, per bbl., $11.37a$11.50—prime, $9.00a$9.50.

TOBACCO—Kentucky, per lb., 2¾a7c—Virginia, 2¼a6½c.

WOOL—(Boston prices.) May 13:

Prime or Saxon fleeces, washed per lb.	40a41	cts.
American full blood fleeces,	37a38	"
" three-fourths blood fleeces,	32a33	"
" half blood do	30a31	"
" one-fourth blood and common,	27a29	"

DURHAM STOCK FOR SALE,

THE subscriber has on his farm near this city, more stock than he needs, and will sell two two years old, and two yearling heifers, one yearling bull, and four spring calves. The price of the latter will be from $50 to $75 when about 3 months old, and the price of the yearlings and two years old, from $100 to $125.

This young stock was got by the prize bulls Duke of Wellington, and prize bull Meteor; both possessing the blood of the stock of the celebrated breeder, Thomas Bates, Esq., Yorkshire, England. The stock is out of first rate milking Durham cows, and will carry its own recommendation. GEO. VAIL.

Troy, June 1st, 1846—2t.

THE GENUINE WARREN PATENT (LATEST IMPROVED) HORSE-POWER AND THRESHING MACHINES.

THESE Machines are now so extensively known that it may seem superfluous to say more to the public concerning them. *But as a very important improvement has been added this season,* it is deemed proper justice to give notice of the same.

The two-horse machines are proved beyond question to be superior to any others known for the price—and now fully bear the warrant of giving entire and certain satisfaction in the following important particulars, viz: "*That they are simple in construction, strong, durable, and not liable to break or get out of order; that they are safe and efficient in performance, threshing by the aid of two horses or oxen, and two men and a boy, 15 bushels of wheat, or 30 of oats per hour, in a thorough manner, and that they are easily portable in an ordinary wagon.*"

Price for the Power and Thresher, only $75 at retail.

J. PLANT, sole proprietor,
No. 5 Burling slip, N. Y. City.

June 1—1t.

GENUINE MORGAN HORSES.

THE subscriber will offer for sale his stud of the choicest Morgan stock on advantageous terms, to those who may wish to grow profitable, enduring, high-priced horses, consisting of the following horses, viz: ***Flint Morgan*** and ***Sherman Morgan, Jr.*** Both were sired by old Sherman Morgan, the most distinguished horse of his times, and are not second as stock horses to any of this far famed race. Flint Morgan, I bought of Jonas Flint, Esq., of St. Johnsbury, Caledonia county, Vt., and Sherman Morgan, Jr., I bought of John Buckminster, Esq., of Danville, Vt., there raised and known as the Blanchard colt, to which places persons are referred for their pedigrees and merits, as well as to testimonials in my possession; also to the counties of Strafford, Canol, Belknap, N. H., where their stock is highly approved and extensively known. Also, four breeding mares of this inestimable blood, viz: Dolly, Kate, Fanny, and Adaline, and all of which were sired by old Sherman Morgan, and are believed in foal. Their blood, power, and appearance, together with their stock already produced, favorably recommend them as breeders. Also, colts and fillies of various ages, may be seen at the stable of the subscriber; all of which will be sold collectively or separately to suit applicants.

JOHN BELLOWS.

Lancaster, Coos Co., N. H., May 1, 1846—3t.

---

100 DOZEN CAST STEEL HOES.

THE subscribers have on hand an elegant assortment of Cast Steel Hoes, highly polished, and finished in the best manner. Among them 50 dozen made by Henry Tower, of Milbury, Mass., of four or five different numbers and prices. Also several other kinds of neck and eye hoes. Merchants and others dealing in hoes are invited to examine them. E. COMSTOCK & Co.

Albany Ag. Warehouse, March 1, 1846.

GUANO,

By the ton or hundred, or in smaller quantities, at 23 Dean-st.
E. COMSTOCK & Co. Albany Ag. Warehouse.

UNITED STATES AGRICULTURAL WAREHOUSE,

191 *Front-street (up stairs,) New-York.*

THE subscribers having in connection with their manufactory opened a warehouse as above, respectfully solicit the attention of farmers and dealers in agricultural implements, who will find it to their interest to call and examine before purchasing, our extensive assortment of PLOWS, of the most approved patterns, made up in the best manner, and of superior materials, with castings for the various plows in use. Also

Straw Cutters,	Road Scrapers,
Fan Mills,	Ox Yokes and Bows,
Corn Shellers,	Forks, Rakes,
Corn and Cob Crushers,	Hoes,
Corn Mills,	Scythes, Snathes,
Horse Powers,	Shovels, Spades,
Threshers,	Churns, Wheelbarrows,
Harrows,	Whiffletrees,
Cultivators,	Neck Yokes,

Ox and Trace chains, &c., &c., &c.

With an assortment of Trucks, Sugar-mills, Mill Gearing, Segments, &c., all of which are offered for sale at the lowest prices, and warranted to be as represented.

TRIMBLE & WATERMAN,
U. S. Ag. Warehouse, 190 Front-st, (up stairs,) N. Y.
Manufactory 502 and 504 Water-st.
May 1—2t.

LEWIS' SEED PLANTER,

Manufactured by E. Comstock & Co., Albany Ag. Warehonse.

THE above drill with several valuable improvements, making it beyond all question the best in use, will be ready for delivery early in April. In this drill are combined the qualities of the ordinary machines, enabling it to plant all the small seeds, together with carrots, parsnips, beets, peas, corn, beans, cotton, hemp, and indeed nearly all crops grown in drills. It is simple, and not likely to require repairs for a great length of time. It may be drawn by a horse, or (as it runs easy,) may be operated by one man, or he may have the aid of a boy for using in a garden or for short rows. Retail price $12.00. To dealers a liberal discount will be made. E. COMSTOCK & Co.

April 1.

FOR SALE AT D. O. PROUTY'S AGRICULTURAL IMPLEMENT WAREHOUSE.

194¼ *Market-street, Philadelphia.*

EVERY variety of Agricultural and Horticultural Implements in general use, of the most approved patterns and superior workmanship, at extremely low prices. A full supply of Prouty & Mears' Centre Draft, Self-Sharpening, Right and Left Hand, Sub-Soil and Side Hill, Wheel and Swing Plows, with points and shares so strong and thoroughly purified and hardened, that one hundred acres of land have often been plowed with a single set, at an expense of 50 to 62 cents. These plows are constructed of the best materials and the highest finish, and for ease of draught and management, the facility with which their points and shares are turned and sharpened their eradication of weeds and thorough cultivation of the soil, they stand unrivalled in the market. They are warranted to work in any soil, and to give perfect satisfaction after fair trial, or they may be returned, when the purchase money will be refunded.

Agricultural, Horticultural, and ***Flower Seeds*** in great variety, raised expressly for this establishment by careful and experienced seed growers, and warranted.

May 1—2t.

LANGDON'S HORSE-HOE OR CULTIVATOR PLOW.

THIS useful and highly valuable article may be had of E. Comstock & Co., at the Albany Ag. Warehouse, 23 Dean-st. Two sizes—one for $7, and the other for $6.

JUST PUBLISHED—PRICE 50 CENTS.

THE FRUIT CULTURIST, containing Directions for Raising Young Trees in the Nursery, and for the Management of the Orchard and Garden. By J. J. THOMAS. Illustrated with numerous engravings.

For sale, wholesale and retail, at the office of "THE CULTIVATOR," Albany, and by M. H. NEWMAN,
Bookseller, 199 Broadway, New-York.

Notices of the Fruit Culturist.

"This is a very valuable work. It contains full directions for the cultivation of all the varieties of fruit grown in this country and will be an invaluable aid to the orchardist and gardener."—*Roch. Dem.*

"This is a new and valuable work just issued from the New-York press, by our fellow-citizen, JOHN J. THOMAS, of Macedon. It is a convenient manual for the orchardist and fruit gardener, being adapted to the climate of the northern states, and should be in the hands of every man interested in these subjects."—*Wayne Sentinel.*

"We hail with real pleasure the appearance of this little work. It is a book "for the million," and just what is wanted by the multitude of persons who have a desire to cultivate fine fruits, and feel the need of knowledge on the subject, but cannot well afford to purchase Downing's admirable book." —*Ohio Cult.*

PATENT PREMIUM FAN-MILLS.

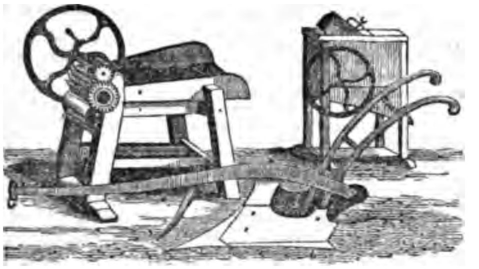
I. T. GRANT & Co., still continue to manufacture the celebrated Improved Patent Fan-Mills, at the old stand, Junction, Rens. Co., N. Y. These mills have taken the *first premium* at the following places:—New-York State Fair, at the Institute. New-York, the State Fair, at Pennsylvania, and the State Fair at Maryland. The subscribers have no hesitation in saying that these mills surpass anything of the kind ever offered in market. They are the only mill that has ever been produced that will chaff and screen wheat perfectly clean in one operation.

We also manufacture *Grain Cradles* of the very best quality, which have taken the first premium at the New-York State Fair. They are for sale at factory prices, at the following places:—

A. B. Allen's, 187 Water-st., New-York;
D. L. Clawson's. 191 " "
E. Comstock & Co.'s, Albany;
H. Warren's, Troy; and
Viall & Warren's, Mechanicsville, Saratoga Co., N. Y.

All orders thankfully received and punctually attended to. All goods delivered at Troy, N. Y., free of charge.

I. T. GRANT, &Co., Junction P. O., Rens. Co., N. Y.
Feb. 1—tf [2]



PROUTY & MEARS, BOSTON,

CELEBRATED, highly approved, and unequalled CENTER DRAFT PREMIUM PLOWS—for sale at their *sole agents'*,

JOHN MAYHER & Co.'s

Agricultural Warehouse, 195 Front-st., near Fulton, New-York.

The subscribers have just received a large assortment of Prouty & Mear's celebrated and highly improved CENTER DRAFT PLOWS, which are in every way *superior to all others now in use;* and having been appointed sole agents for the sale of the same in the city of New-York, we invite the public to call and examine for themselves, as the above plows cannot be obtained at any other establishment in the city. Dealers and others in the country supplied on the most reasonable terms.

We also wish to inform merchants and farmers that we have constantly for sale plows of our own manufacture, and all others now in use.

The following is a list of prices of some of the plows manufactured by us.

A No. 1, Worcester patent,		$1 50
A " 2, " "		2 00
A " 3, " "		2 50
2 B " "		3 50
2 B " "	with colter,	4 00
Eagle, No.1, " "		4 50
" " " "	with colter,	5 00
" " 2, " "		5 00
" " 2, " "	with colter,	5 50
Meadow C " "		5 50
" " "	with colter,	6 50

Castings to fit the Worcester Ploughs, 3½ cents per pound.

We likewise have for sale the most extensive assortment of *Agricultural Implements* ever offered in this city, most of which are new and highly improved patterns, warranted to be made of the best materials, and of very superior finish, among which are the following:

Pitts' Corn and Cob Crusher,
Hussey's " "
Sinclair's " "
Hussey's Reaping Machine,
Bark Mills, 4 sizes,
Coffee " "
Corn Shellers of all kinds,
Horse Powers " "
Threshing Machines "
Subsoil Plows, of the most approved kinds,
Cultivators of the most approved kinds,
Sinclair's Stalk and Straw Cutter,
Hovey's " " "
Stevens' " " "
Greene's " " "
I. T. Grant & Co.'s Prem. Fan Mills,
Clinton's Prem. Fan-Mills,
Rice's " "
Holmes' " "
Store Trucks, Wheelbarrows,
Mule Waggons, &c., &c.,

Langdon's much approved Cultivator Plows or Horse Hoe. All kinds of plow castings constantly on hand. All the above articles are offered for sale on the most reasonable terms. Castings of all kinds made to order.

JOHN MAYHER & Co.,
195 Front-st., N. Y.

N. B. *Beware of Imposition.* Any person offering plows for sale, and representing them to be of our manufacturing without the full name "J. MAYHER & Co.," on the mouldboard and beam of the plows, are guilty of a *false representation*, as no person in the city and county of New-York has the genuine article for sale but ourselves. April 1—tf [2] J. M. & Co.

TREATISE ON MILCH COWS.

PUBLISHED on the first day of April, 1846, a Treatise on Milch Cows, whereby the quality and quantity of milk which any cow will give may be accurately determined by observing Natural Marks or External Indications alone; the length of time she will continue to give Milk, &c., &c. By M. FRANCIS GUENON, of Liborne, France. Translated for the Farmers' Library, from the French, by N. P. TRIST, Esq., late U. S. Consul at Havana, with Introductory Remarks and Observations on the

COW AND THE DAIRY,

by JOHN S. SKINNER, Editor of the Farmers' Library, illustrated with numerous engravings.

☞ Price for single copies, neatly done up in paper covers, 37½ cents. Full bound in cloth and lettered, 62½ cents. The usual discount to Booksellers, Agents, Country Merchants, and Pedlers.

Farmers throughout the United States may receive the work through the mails. The postage on each copy will be about 7 cents. By remitting $2, free of postage, we will send *seven copies* of the work done up in paper covers.

Country merchants visiting any of the cities can procure the work from Booksellers for those who may wish to obtain it. Please send on your orders. Address

GREELEY & McELRATH, Publishers,
April 1—3t Tribune Buildings, New-York.

BURRALL'S CORN SHELLER.

THE subscribers are now fully supplied with this valuable Sheller so as to be in readiness hereafter to fill orders for any number, without delay. A further trial during the last month has fully established the superiority of this over all other Shellers for hand power. For description, engraving, &c., see Cultivator for February, page 60. Retail price $10, with a liberal discount at wholesale.

E. COMSTOCK & Co.
Albany Agrl. Warehouse.
March 1st, 1846.

VALUABLE FARM AND COUNTRY SEAT FOR SALE.

THE subscriber offers for sale the Farm on which he now resides, situate in Southwick, Hampden county, Mass. The road from Hartford to Northampton, via Westfield, along which a mail coach passes daily, and nearly through the centre of the Farm, which contains about 400 acres, nearly half of which is wood land, heavily timbered. It is bounded on one side by the Farmington canal, which renders the communication with New-Haven, an excellent wood market, easy and expeditious. The buildings are a mansion house, with a wing, the latter new, making a front of 70 feet. Also a house for a tenant; three large barns, nearly new, covered with pine and painted; a corn house, carriage house, sheds, &c. Great pains have been taken in selecting and cultivating choice fruit, and there is now on the Farm, in full bearing, a great abundance of the best varieties of apples, cherries, peaches, &c. A part of the land is of superior quality, and on almost every lot is living water.

Tariffville, a larg manufacturing village, seven miles distant, affords a ready market for wood and every kind of produce, raised on a farm. This is one of the most valuable and desirable locations in the country, not only for farming purposes, but for the gentleman of leisure. A large portion of the purchase money, if desired, can remain for a term of years. I will sell the whole together, or in two parts. Letters of inquiry addressed to me, will receive prompt attention, or inquiry can be made of LUTHER TUCKER, Albany, or of R. SHURTLEFF, Springfield.

ROGER S. MOORE.
Southwick, March 1, 1846.—6t

AGRICULTURAL WAREHOUSE,

By Ezra Whitman, Jr., 55 Light-street, Baltimore.

THE proprietor of this establishment is the sole agent in Baltimore and vicinity, for the sale of the following *new* and valuable improvements, viz:

Whitman's improved Rail-way Horse-Power and Threshing Machine, which threshes and cleans the grain at one operation.

Prouty and Mears' Centre Draft Plow.

" Hovey's Premium Straw Cutter.

I. T. Grant & Co.'s Premium Fan-Mill.

Douglass' Premium Pumps, which are so constructed as to prevent freezing in the coldest of weather.

Rogers' Mill, for cutting and grinding corn stalks.

Together with a general assortment of the *latest* and most *approved* agricultural implements, constantly on hand, and manufactured to order.

EZRA WHITMAN.
Baltimore, Nov. 14. 1845.

DURHAM BULL FOR SALE.

THE subscriber (not having sufficient use for him,) offers for sale his imported, thorough bred Durham Bull, "Prince Albert,"

He is five years old—a roan, of medium size—quiet in temper, and easily managed. For a portrait and description of this bull, see the August number of the Cultivator, and for his pedigree see the British Herd Book, vol. IV., page 382. His sire was the celebrated bull. "Sir Thomas Fairfax."

If not previously sold, he will be offered for sale at the next show of the New-York State Agricultural Society.

Letters on the subject may be addressed to the subscriber at Red Hook, Dutchess county, N. Y., where the bull can be seen.

Jan. 1, 1846.—tf ROBERT DONALDSON.

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ROGERS' PATENT STEEL CULTIVATOR TEETH.

THE Cultivator is to a great extent superseding the use of the plow and harrow especially for working summer-fallows, &c., where complete pulverization is necessary. Its use has become very general in Western New-York, and has been attended with great advantages. Steel teeth may be had in any quantity of the undersigned at the Albany Agricultural Warehouse. Price for a sett of nine teeth, $5.00.

To manufacturers and dealers a liberal discount.

E. COMSTOCK & Co., 23 Dean st.

AGRICULTURAL MACHINERY.

THE following Agricultural Machines are particularly recommended to extensive Planters for great capacity, strength, durability. and performance. From our experience in their manufacture, and success attending sales of them the last ten years, we can safely recommend them to be equal, if not superior to other similar Machines made in this country, viz:

Lever Horse Powers, for 2 horses, with strength sufficient for draught for eight,............	$150
Lever Horse Powers, for 2 to 6 horses,..............	100
Endless Chain Horse Powers, No 1,..............	75
Do. do. do. do No. 2,..............	100
Driving Leather Bands,..............	8 to 10
Threshing Machine, with 20 inch cylinder..............	40
Do. do. do. 30 do.	60
Goldsborough Corn Sheller and Husking Machine, very simple and excellent,..............	40
Pettigrew N. Carolina Corn Sheller,..............	80
Corn and Cob Crushers, ...	30
Corn Mills, for grinding fine or coarse meal, ...	40
Wheat Fans, (Rice's Patent.)..............	25 to 30
Do. do. Watkin's extra,..............	45
Cylindrical Straw Cutters, for cutting straw, hay, corn-stalks, &c., (the medium size,) price,..............	30 to 40
Cylindrical ever cutting,..............	14 to 20
Hand Corn Shellers,..............	12 to 14

Also, plows of most approved construction, harrows, cultivators, grain cradles, and every variety of Farming and Garden Tools. Field and Garden Seeds, an extensive assortment.

☞ See Catalogue for particulars.

R. SINCLAIR, Jr., & Co., Baltimore.

June 1, 1846.—2t.

ALBANY AGRICULTURAL WAREHOUSE.

THE proprietors of the above establishment tender their thanks to those who have so liberally patronized them during the first six months of their business in Albany, and would respectfully announce to all who desire to encourage the manufacture and sale of improved implements and pure seeds, that their arrangements for future business are such as to afford the assurance that almost any article belonging to the agricultural trade can be furnished on the best terms.

We continue to give especial attention to the sale of IMPROVED PLOWS, and flatter ourselves that our assortment is fully equal, in point of style and finish, and particularly in their adaptation to different soils, and to all kinds of work, to any other establishment in this country. We have constantly on hand all sizes of the Worcester, Centre Draft, and Diamond plows; Subsoil plows, &c. Also Langdon's Cultivator Plow, and a good stock of Cultivators, Geddes' Harrows, &c.

Lewis' Seed Planter is manufactured expressly for us, and from a thorough trial this spring we think it altogether the best in use. It will plant all kinds of seeds at any required distance, and is not liable to get out of order. Price, at retail, $15.

Haying tools, such as scythes, Snaths, Forks, Quinnebaug and Cummington Scythe Stones, Horse and Hand Rakes, &c., at wholesale and retail. Merchants are invited to examine our assortment.

Ames' Shovels and Spades, by the dozen as low as they can be had in N. Y.—A great assortment of Hoes of all sorts and prices.

Garden tools of every description, both common and extra finish Pruning tools of all sorts, budding knives, caterpillar brushes, &c., &c. Dairy furniture, such as Churns, Tubs, Pails, and Butter Ladles; measures of all sizes both iron-bound and common; Scoop Shovels, and a general assortment of wooden ware. Mott's Agricultural Furnaces, from one-half barrel to four barrels. Well and Cistern Pumps, a superior article. Wheelbarrows of different sizes and prices, furnished cheap to contractors and others.

Grant's Fan-Mills, four sizes, Warren's Root Cutters, Hovey's Straw Cutters, Burrall's Corn Shellers, with nearly all the improved machines of the day. Ox Yokes and Bows, Tie-up chains, Halter, Trace, and draft chains. Bar pins, (a new article,) Rein Snaps, Ox Balls, Cattle and Horse Cards, Curry Combs, and Horse Brushes.

Guano, by the ton, hundred, or smaller quantity.

SEEDS of every kind and best quality always for sale. We would just now call attention to our stock of turnep seed, embracing a recent importation of Ruta-Baga, Strap Leaf, Flat Dutch, Flat Field, English Norfolk, Yellow Malta, Yellow Scotch, White Globe, Early Garden Stone, &c., &c. Sugar Beet, Carrot, and all other seeds, still on hand. Orders are respectfully solicited.

E. COMSTOCK & Co.

June 1, 1846.

VALUABLE FARM ON STATEN ISLAND FOR SALE.

THE well known farm of the late Samuel Akerly, M. D., situated on the South side of Staten Island, in the town of Southfield, Richmond county, in consequence of the decease of its late owner, is now for sale. It contains 125 acres, 25 of which are woodlandl; is in a high state of cultivation, and well stocked with a variety of fruit trees. The house has been recently enlarged—is ample and commodious; the barns are new, and the farm is in good fence. It has a wide front to the water on a bay which abounds with the best kind of salt water fish, also with clams and oysters, all easily procured fresh from their native element. The experience of a long course of years, for the main part of the dwelling house has stood for more than a century, has demonstrated that the situation is perfectly healthful.

The late owner, Dr. Akerly, died in July last; he had cultivated the farm for a number of years with great assiduity and care, keeping a daily and most minute register of the precise amount of labor and cultivation bestowed on each field, and noting many important observations which would be highly instructive and useful to the future owner. The purchaser may be furnished with a copy of this diary.

The site of this farm is extremely beautiful—the approach to it from the main road is a private road of about half a mile in length, running mostly through a piece of woodland, consisting of young timber of vigorous growth. After the visitor has travelled on this road about one-third of a mile, there opens upon him a prospect which takes in the low land, comprising the cultivated part of the farm—the placid and bright bay which separates Staten Island from Monmouth county, N. J.,—the highlands of Neversink, with the two lighthouses erected thereon—the lighthouses on and near Sandy Hook, together with the one at Prince's Bay, including the west end of Long Island. All the vessels employed in the commerce of New-York with foreign countries may be seen as they come in and depart, from the dwelling house and several other points on the farm.

The late owner, Dr. Akerly, who was born and educated in this city, after extensive examination and inquiry for a farm to which he might retire, on account of impaired health, selected this spot, to which he removed in the year 1839. Here he sought health and quiet retirement, and found them, until the day before his decease. He became exceedingly attached to the farm as a residence, and would have most reluctantly exchanged it for any other residence whatever. Such were its attractions that he never left it a single day, in winter or summer, but with regret.

For further particulars apply to HIRAM KETCHUM, Executor, No. 31 Wall st., or SAMUEL BOWNE, No. 88 John-street July 1, 1846.—3t.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. III. ALBANY, JULY, 1846. No. 7.

THE CULTIVATOR

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REPORT ON FARMS.

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THE New-York State Agricultural Society offered for the year 1845, three premiums on farms, under the following specifications:

"For the best cultivated farm, of not less than fifty acres, exclusive of wood-land and waste-land, regard being had to the quantity and quality of produce, the manner and expense of cultivation, and the actual profits:

First Premium,	$50
Second Premium,	30
Third Premium,	20

A series of questions was propounded to which the claimants of premiums were required to submit written answers.

The report of the committee appointed to consider the claims and statements offered to the Society under this head, embraces a very large amount of valuable information. It was submitted by the Hon. J. P. BEEKMAN, and is published in the Society's volume of Transactions for last year. The report states that nine several communications were received in answer to the queries proposed; to the authors of three of which the Society's premiums were awarded, and to the authors of the remaining six, were awarded full setts of the Transactions. The statements of the successful competitors are published in full, appended to the report, and an abstract is furnished of the other statements, embracing the most important facts which they contained.

We make the following extracts from the abstract of the statements furnished by the competitors who did receive premiums.

Daniel Gates, of Sullivan, Madison county, obtains an average yield of 55 bushels corn per acre; sows 3½ bushels peas to the acre; yield about 56 bushels per acre. His hogs generally weigh about 370 lbs. each. He destroys the Canada thistle by plowing first in September, and then four or five times the succeeding season, and sowing wheat. His fences are stone, costing a dollar and five cents per rod; stone topped with cedar, ninety-three cents per rod; stumps ranged in line about forty-five cents per rod; and rail fence costing about seventy-six cents per rod.

William Capron, of Macedon, Wayne county, cultivates 107 acres—pursues a regular rotation of crops, so as to come round once in six years. Begins with summer-fallow, followed by wheat; next corn; then barley, followed by wheat, seeded with clover. Sows two bushels of wheat to the acre; leaves his summer-fallow, after plowing, ready to sow in ridges; sows and harrows lengthwise, so as to have the growing wheat as much as possible in drills; sows *early* in September—if sown too early, there is danger of the Hessian fly—if late, it is liable to rust. Soaks his wheat in brine, and mixes it with slaked lime, before sowing; has never had any rusty wheat. Wheat crop generally averages about 25 bushels per acre—never less than 20. Sows three bushels barley to the acre; average crop, 30 bushels to the acre; manures for corn 50 to 60 loads to the acre. Sows clover and timothy, from 7 to 10 lbs. per acre; meadows yield about 2½ tons to the acre. He salts his hay, one peck to the ton, if any way damp—if perfectly dry, does not use it.

N. S. Wright, of Vernon Centre, Oneida county, thinks the Devons mixed with the native breed, are the hardiest animals and easiest kept. Keeps 209 sheep; his wool averaging about 3 lbs. per fleece, and sold the largest portion for 62½ cents per lb. His hogs at nine months, average 390 lbs.

Rufus S. Ransom, Perryville, Madison county, made the following experiment with potatoes. On one row he put on each hill a teaspoonful of plaster; on the next, an equal quantity of lime; and on the third, the same quantity of salt. The first row yielded 281 lbs.; the second 300 lbs.; and the third 282 lbs. The fourth row, where nothing had been used, yielded 273 lbs., and the row immediately before the first, 274 lbs. According to this experiment, the lime would have increased the product 16 bushels per acre.

The soil vegetable mould mixed with clay, gravel, and a slight proportion of sand; subsoil clay and shaly slate.

The Committee awarded the first premium to George Geddes, of Camillus, Onondaga county; the second to William Buel, of Gates, Monroe county, and the third to Wm. Garbutt, of Wheatland, Monroe county.

In connexion with the report, the Committee submit some remarks which we deem of so valuable a character that we transcribe them at length

……

The first series of questions to which answers were required, are, "The kind of soil cultivated, and the manner of doing it." The answers to the first branch of this subject are such as any ordinary intelligent farmer would make, and which were tolerably well understood, perhaps enough for practical purposes. Indeed, the committee found it so; but the second branch of inquiry, viz: "What is the best mode of improving the different kinds of soil on your farm?" admits of great latitude of remark, inasmuch as it is universally conceded that the different kinds of soil, such as clay, sand, gravelly loam, alluvial, or a mixture of two or all the different varieties, must, to be profitable, be cultivated somewhat differently.

The committee will not go into this extensive inquiry. They will take up only one important part of it, and that is the query, "What depth do you plow, and what effect has deep plowing had on various soils and crops?" Upon reading over the several communications in answer to this inquiry, and as connected with it, the use of the subsoil plow, it will be noticed that the general answer is that the several individuals plow to the depth of from five to seven inches, in one instance I believe to twelve; and that all speak in general terms of deep plowing as beneficial, I think without one dissenting voice. But it must be observed that in no instance does any one give this opinion as the result of careful investigation, founded on a set of experiments intended, as far as can be done, to settle this question. They simply state it as a conviction founded on general observation. The conclusion drawn is probably correct; it is so at least as far as the observation of one of the committee has gone. It is only to be wished, from the importance of the interest involved, that the difference in results of produce from shallow or deep plowing, wide or narrow furrows, one or repeated plowings, and the plowing up every inch of ground, or the leaving half a dozen or more baulks in each furrow, had not been oftener or more satisfactorily tested, and the entire farming community informed of the result, and thus enabled to make up their minds on the best mode, and then adopt it.

In American farming, it is unfortunate for our interests that this subject is yet so imperfectly understood, and that upon the community as a mass, the best mode has not long since been settled, for we see it practised in all its variety, and it appears to at least one of the committee that *shallow* furrows have a decided advantage as to the quantity of land plowed. But is it reasonable that if we are to stir the ground at all, it is not good sense and good farming too, to stir it deep and stir it well? We revolt at the idea of sowing without plowing, because the practice has not only been handed down from remote antiquity as essential to the growth of plants, but not to do it is repugnant to common sense. Does not the same good sense tell us that if it is necessary to loosen the soil imperfectly for the benefit of growing plants, it is more useful to do it in the best possible manner; to stir every part of it and make it as light and loose as possible? By doing so we give to the roots of plants a facility of throwing out their rootlets in every direction; we give them a chance of absorbing all the juices that are in the earth intended for their benefit, of permitting the air to enter the loose soil, and make it more friable; of aiding the rains and dews to penetrate easily and quickly; and if it is a soil that holds water to open the earth to permit it to pass off and not injure the growing plants. These are surely benefits that must have fallen under the observation of every practical farmer, and every encroachment upon them has been visited by corresponding loss. In the nature of things it must be so, for it is the dictate, not only of common sense, but common observation. Are not these the data which ought to govern us in the practice of this important branch of husbandry; and can any man be a good farmer without he follows out these suggestions? For surely if it is necessary to do it at all, it is indispensible to entire success to do it in the most perfect manner. We are not generally careful enough in the selection of our plows, plowmen and teams, for remember all our success as men and citizens depends mainly upon the manner in which this operation of farming is carried out. They who do it the best must be the most successful, and those who do it most imperfectly the least thrifty. Our greatest fault is, we are too much in a hurry with the team, which is usually too light. It is seldom we stop for baulks or to remove obstacles, but good farming will not allow this. Our great object is to mellow the ground perfectly. To do this a baulk must never be made, or if made inadvertently, go back and take it up. We must plow deeply if we wish the roots to penetrate deeply, and take narrow furrows if we intend to turn the entire surface. This is the practice through all the best cultivated parts of Europe, for a furrow from ten to fourteen inches wide is never seen there. From six to seven inches is the width of the furrow slice, and it is as uniform as a good tool, a powerful team, and the best plowman can make it. The earth is not thrown over in masses to remain as compact and adhering as the simple turning over without breaking up the soil will effect, but the process of plowing pulverizes the soil and opens it. Now, is not one such plowing worth more to the growing plant than two or three, where from twelve to eighteen inch furrows are cut at a slice? In the last there is a mass so large as to remain undisturbed, except simply so far as the turning over is concerned, whilst the other being a smaller quantity *will* more naturally fall to pieces. Why do we summer fallow, but to give the field the benefit of repeated plowings, thus loosening perfectly every part of it, and permitting every particle of earth to be acted on by the rains, the dews, and the influence of light and warmth? The effect of all this stirring is observable upon the seed put into the ground, for all have observed that the grain sown in a fallowed field will germinate several days quicker than on one where only one plowing has been practised, and the growing plant will maintain its superiority for a long subsequent time. It is to be hoped, therefore, that our farmers will turn their attention to this important subject, and give us the result of some well conducted experiments, which will establish the difference in product between a well stirred or an imperfectly plowed field. Of so much importance is this subject regarded in Europe, that experiments are there in process of execution to ascertain how far spade husbandry as a farming operation will compare with that where the plow is used; and as far as we are informed, although the expense is much greater, a corresponding increase of crop has nevertheless uniformly been the result. Indeed, the experimenters have been induced to carry out their plans and continue the system. Their more numerous population gives them much greater facilities than we enjoy, and they have established the great practical truth, that a deep and perfectly stirred soil is an essential element of a farmer's success.

No one of our several correspondents upon farm management acknowledges the use of the subsoil plow; it really appears, to at least one of the committee, that to follow the first furrow with another team drawing the subsoil plow, and farther deepening it from eight to ten inches, whilst it does not bring this soil to the surface, must be extremely beneficial to all of our root crops, and might be serviceable to corn. It opens the soil where required, together with the ordinary plow, eighteen inches, and thus permits the roots of all plants to penetrate deep, at the same time that it lets off any superfluous or standing water. Good farming must hereafter require the use of this excellent implement in many soils, and the benefits to be derived from it are yet to be more carefully ascertained; but it certainly promises to be one of incomparable value to the farmer. The subject of plowing is a fruitful theme to descant upon for an observing man, fond of the cultivation of the earth. But as there are yet many other topics to be touched upon, each of great importance to the farmer, the committee will forego any further remark on this branch of the subject, but simply will say that the plow for the last six or eight years has received in its construction such important improvements as will amply compensate for all the trouble and expense our state and county fairs have ever cost. It is competition that has brought them for exhibition hundreds of miles to our fairs, and this exhibition and competition have been the cause of the improved construction of the instrument. One fault now is, that they plow too wide. Remedy that evil and they will compare for execution with any plows ever made.

The next class of queries is on the subject of manures, (viz.) "How many loads of manure (30 bushels to the load) do you usually apply to the acre." "How do you manage your manure? is it kept under cover? how much do you manufacture? how much apply? of what kind? fermented or unfermented?" &c., &c. This branch of agriculture is of no less importance than the one upon which the committee have already at some length commented, and is equally deserving of all the consideration that the farmer can bestow upon this part of his most important vocation. All created things are so constituted that the perfect development of one almost necessarily involves the destruction of its predecessor. This is most emphatically the case with the long list of vegetable productions given us by the Almighty. The death and decay of the one affords the aliment for the growth and development of its successor, and its perfection is much aided by the application of the decayed remains of the former; and the series by carrying out the rule instead of becoming more and more degenerate, is only rendered more vigorous and healthy. Manure, it is generally understood, is the organic remains of what has constituted vegetable life. Its application in this state to the germinating seeds and quickly absorbing roots stimulates the tender plant to put forth all its powers for growth and maturity. That this is a law of creation, is dictated alike by reading, reflection and observation. Men cannot violate this law without loss, nor act upon it without remuneration. Such being the case, what then becomes our duty? Why, to use all our efforts to make or gather so much of this valuable treasure as we can possibly consume. Not to be concontent with the fœcal discharges of our cattle, collected in our barn-yards alone, but to use as much time as is consistent with our other farming duties in collecting all else that will contribute to its increase. Providence has not stinted us to the use only of one kind of manure, but in his wise dispensation he has enlarged the field from which it may be gathered, almost "*ad infinitum,*" and made the supply almost exhaustless. Indeed, he has done more; he has made the supply the more abundant, the greater the demand, leaving it to the industry of man alone to make it commensurate to his wants. Within a few years the substances used for it have increased to a great extent, and instead of being confined now only to the supply of the barnyard, it shows us in its catalogue quite an extended variety. But the great source of dependence for the farmer is his barn-yard, and effort on his part will add much to increase its quantity. Indeed, if he does but proportion his stock to the productions of his farm, he has it in his power constantly to increase its fertility. He must not be content with the gatherings of his stables and cattle yards. He must use abundance of litter—draw in the muck, leaves, scrapings of ditches, sods, ashes, both of wood and coal; indeed, almost every locality has its own peculiar advantages to increase this kind of collection, and it is very easy generally to double the quantity that under the ordinary course of farm management would be collected. Assiduity in this particular is sure to pay well, for by increasing the fertility of the soil, you not only enlarge the crop, but it enhances the means, from its very abundance, for its own subsequent augmentation. The committee, from the several communications on farm management, came to the conclusion that in no one of these did the quantity made come up to the standard they had wished, although in most cases it was fair, yet they do not hesitate to say that in many it ought to have been greatly increased. Until this is done, our crops will not bear a comparison with the average yield in the best cultivated countries abroad. The subject of using fermented or unfermented manures, they will not now touch upon—nor whether it is best to plow it under shallow or deep, or use it as a top-dressing—as all this may vary according to the season of the year and the crop upon which it is intended to be used. To enter into all these details would make this communication too extended.

The remaining queries propounded by the Executive Committee are on "field crops, grass lands, irrigation, domestic animals, fruits, fences, buildings," &c. On these topics we will not now enlarge. How far the answers to the several queries propounded meet the expectations of the committee, the public on reading them can judge as well as they; but they feel called upon to say that it was evident from the several communications, that sufficient attention has not been paid to making regular daily entries in their farmer's journal. Many of these statements no doubt were made with as great a regard to accuracy as circumstances warranted, but in hardly an instance with a definiteness satisfactory to the committee. Indeed it cannot be done to the satisfaction of the farmer without he keeps regular farm accounts of all expenses and all his products. This would give confidence to his statements and precision to his observation, and I have no doubt would end in more individual prosperity than any other plan for his benefit that could be devised. If a farmer, like a merchant, would enter all his transactions, keep a regular debtor and creditor account, and make the requisite notes upon such things as require to be remembered, he would make few annual mistakes on his farm, and still fewer for his ultimate success. He would at the end of the year be enabled to ascertain both his circumstances and the products of his year's labors, and if unsuccessful, it would not be from want of information, should the continuance of a bad system end in bankruptcy. We are yet in hopes as education is diffused and our farmers become more imbued with a desire to adopt all the means to make them better acquainted with their business that the keeping of farm accounts will be generally adopted. It may not be inappropriate to the present occasion to look a little into the statistical information gathered in taking the census of this state as far as its agriculture is concerned. It has been carefully compiled by S. S. Randall, Esq.

[The table here given in the report, is omitted, as the substance of it is embraced in Mr. Randall's summary, published last month. In reference to the average yield of crops—viz: wheat 14 bu., oats 26, barley 16, peas 15, rye 7½, corn 25, potatoes 90—the committee proceed to comment as follows:]

When we look over these results and see how small the quantity raised compared to what has been done—wheat 60 bushels to the acre—oats 70—barley 50—peas 45—rye 40—corn 130—and potatoes 500—it leaves no room to conjecture how much farther we have to advance in Agriculture before we can in truth be called farmers, for three-fourths remain yet to be done. We know it can be done, for we have thousands of instances of the production of these several large crops in the state, and that too in many instances from what was formerly worn-out lands. As a striking instance of this, we will refer you to the report of the officers of the Washington Co. Agricultural Society, contained in this volume. With this view before us, shall we despair to raise the agriculture of this state so that succeeding averages shall testify to our improvement. It must be done. It can be done—and if farmers will call upon the intelligence of the head to aid the labor of the hands, it will be done. We have a noble state, a fertile soil, a salubrious climate and industrious people. All we want is to throw our mental and bodily energies into the fulfilment of the task, and a quadruple product will in a few years compensate you for the toil. When we look at this great state, and cast an eye to what it may become, we are lost in contemplation of her future wealth and greatness, and the Agricultural Society will not do itself justice nor attain the ends of its creation, if, through her efficient committees in their several departments, they do not give an effective impulse to improvement and foster a taste for the pursuit of husbandry among the citizens, and let me mention this for their encouragement, that retiring statesmen of every age and nation have chosen this employment as best fitted to give to life its sweetest charm, and to the restless mind the greatest repose.

All of which is respectfully submitted.

In behalf of the Committee, J. P. BEEKMAN.

EXTRAORDINARY FECUNDITY.—An English paper gives an account of a sow which had lately been killed at Lincoln, that had produced the following numbers of pigs in successive litters:—15, 14, 15, 16, 14, 16, 17, 15, 14, 16—152—107 of which were reared. She took the prize for extra stock at Lincoln in 1842, and the first prize in 1844; one of her pigs took the second prize on the latter occasion. She weighed 400 lbs. We once saw a Chinese sow which produced nineteen live pigs at a litter.

FARM STATEMENTS.

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We give below the statement of Mr. Geddes, who received the first premium of the N. Y. State Agricultural Society on farms. The statements of others will follow hereafter.

Luther Tucker, Esq.,
Rec., Sec'y N. Y. State Ag. Society:

The following answers to the interrogatories of the New-York State Agricultural Society are respectfully submitted:

1. My home farm consists of three hundred acres. Thirty are in wood. About ten acres of the side hills are unsuitable for plowing, and are only used for pasture; the remainder is under cultivation, except what is required for roads, yards, &c.

2. The soil is principally a disintegrated gypseous shale, it being the first stratum below the Onondaga lime, running up to and taking in some sixteen acres of the lime, which is covered with about one foot of soil. This is in the wood lot, and furnishes quarries of good stone. There were formerly a few cobble stones on the surface, and one very large granite boulder. A small brook running through the farm is bordered by about forty acres of soil that has been deposited by the brook, and is not suited to the production of wheat. In the valley of the brook is found marl and peat, and at the springs that come from the hill sides calcareous tufa.

3. I consider the best modes of improving the soil of my farm to be deep plowing, application of barn-yard manure, free use of sulphate of lime, and frequent plowing in crops of clover.

4. Unless I am plowing in manure, I plow from six to eight inches deep. Deep plowing upon the gypseous shales, never fails to increase fertility. Full trials justify my speaking with confidence on this point.

5. I have not used the subsoil plow, as I have no retentive subsoil on my farm.

6. I apply my barn yard manure in large quantities at a time, preferring to at once do all for a field that I can in this way. About fifty loads of thirty bushels each, of half rotted manure to the acre at a dressing.

My stables are situated on two sides of a square; the manure, as it is taken from the stables, is at once piled in the centre of the yard, as high as a man can pitch it. Sulphate of lime is put on the manure in the stables, and the heap, as soon as fermentation commences, is whitened over with it. My sheep are all fed under cover, and most of their manure is piled under cover in the spring, and rotted. As to keeping manure under cover, my experience has led me to believe, that the best way is to pile it under cover, when it is most convenient to do so, and only then as I am compelled to apply water to the heap to rot it, unless it has received the snows and rains out doors. The coating of sulphate of lime, will, I believe, prevent loss of the gases, and in process of fermentation the heap will settle so close together, that water will not after that enter into it, to any considerable depth, particularly if it was piled high and came up to a sharp point.

7. My means of collecting and making manure, are the straw, corn stalks, and hay raised on the farm, fed to farm stock, and what is not eaten, trampled under foot, and converted as before described, so much of it as goes through the stables. But large quantities of straw never pass through the stables at all; stacks are built in the yards, and the straw is from time to time strewed over the ground, where it receives the snows and rains, and is trampled by the cattle. Embankments around the lower sides of the yard, prevent the water from running off, and confine it in water tight pools, which are filled with straw to absorb the water, except so much of it as is wanted to put on the garden.

8. I make from four to five hundred loads of manure annually, and it is all applied.

9. Most of the manure is put on corn ground. It is drawn on about one-half rotted, and spread over the surface, and plowed under about four inches deep. The reason I do not plow it under deeper is, that I suppose I must plow deeper the next time to bring up the earth into which the manure has been carried by the rains.

10. I have never used lime in any quantity, excepting in the form of a sulphate as a manure, believing that there is enough in the soil. Sulphate of lime, I use in large quantities; fourteen tons this year. It is sown on all the wheat, corn, barley, and oats, and on the pastures and meadows in quantities varying from one to three bushels to the acre. All the ashes made by my fires is used as a manure, and I think that it is worth as much as the same bulk of sulphate of lime to use on corn. Sulphate of lime has been used on the farm for many years, and in large quantities, and I think it essential in my system of farming. I have not used salt or guano as manure.

I raised this year about

77	acres	wheat	yield'g	1,616	bu., averaging pr. acre,	20.99
15½	"	corn,	"	821	"	52.96
18	"	barley,	"	665	"	36.94
38	"	oats,	"	2,249	"	56.55
2½	"	potatoes,	"	292	"	116.80
				5,643		

50 acres of pasture and 30 of meadow.

12. I sow at the rate of two bushels to the acre, about the fifteenth day of September. I summer fallow but little, and only to kill foul stuff, and to bring the land into a good state of cultivation. A part of my wheat is sown on land that has been pastured, or mowed, plowing it but once, but that done with great care, and as deep as I can. The oat and barley stubble, as a general rule is sown to wheat, plowing only once, having previously fed off the stubble with sheep so close as to have most of the scattered grain picked up. The plowing is done as near the time of sowing the wheat as is practicable, and the wheat is sown upon the fresh furrows, and harrowed in. I have tried various modes of treating stubble, but none of them has answered as well as this. What little grain of the spring crop is left on the ground is turned deep under, and the wheat being on top gets the start of it. The harvesting is done with a cradle. Corn, is generally planted by the tenth day of May, on sod land; most of the manure is put upon this crop. The corn is planted in hills three feet apart each way; from four to six kernels in a hill, and no thinning out is practised. Sulphate of lime, or ashes is put on the corn as soon as it comes up. Two effectual hoeings are given to it, and a cultivator with *steel* teeth, is run twice each way of the field between the rows, to prepare it for the hoe. Corn plows and cast iron cultivator teeth are entirely discarded.

At the proper time, the stalks are cut up at the surface of the ground, and put into small stooks, and when the corn is husked, the stalks are drawn at once into the barn, without being again set up. In this way they are kept in good condition, and labor saved.

Oats or barley is sown the next spring, on this corn stubble. Of each of these grains, three bushels of seed is put upon an acre. As soon as the grain is up, sulphate of lime is sown. These grains are also sowed on sod land. The reason of this is, I cannot command the manual labor necessary to cultivate *one-fifth* of my land in corn, and secure it at the proper season. The rotation of crops I attempt to pursue, is—first corn, second oats or barley, third wheat on the oat or barley stubble, fourth clover and herds grass pasture—the seed sown on the wheat—fifth meadow. But inasmuch as certain portions of my farm are not suited to raising wheat, and as I cannot command the force necessary to cultivate the proportion of corn, I am compelled to modify; but I come as near to this rotation as I can.

The usual time of sowing barley is as soon as the ground is settled—commonly by the 20th of April. The oats are sowed later generally early in May.

The yield of the crops for this year has already been given, and I think I am safe in saying, that the average of one year with another, upon the system of rotation before given, comes up to that of this year. The pasture will sustain two cows upon an acre, and the hay will generally yield two tons to the acre.

13. This interrogatory has been so far anticipated, that it is only necessary to add, that sometimes manure that is not convenient to draw in the spring, is put upon the corn stubble and upon wheat.

14. This interrogatory has been anticipated, in part. My reasons for applying my manure to corn, are, that I have better means of destroying the seeds of weeds, and from the belief that corn is the best crop to take up that part of the manure that the first crop can use, and that the manure is thus prepared for the crops that follow. Experiments that I have made, go to show that, coarse manure benefits the second crop as much as it does the first—and the third crop cannot but receive great benefit from it. The fourth and fifth crops probably do not impoverish the soil. By this rotation, three crops are had for three plowings; and my experience proves that the soil increases in fertility under this management.

15. Potatoes. In consequence of the disease that has injured this crop, there were but two and a half acres planted this year; the disease was very destructive to my crop last year, but thus far nothing has been discovered of it this year. I have not been able to discover either the cause or remedy for this disease.

16. Herds grass, at the rate of eight quarts to the acre, is sown on bottom land. Clover and herds grass, mixed in equal quantities, is sown on uplands, at the rate of eight quarts to the acre, commonly. Generally sow herds grass in September, when it is sown alone on wheat; but if mixed with clover, sow it in March, on a light snow, if possible; the sowing is done by hand. The last spring, I sowed herds grass seed at the rate of eight quarts to the acre, on a field of wheat that I wanted to mow. Sixteen quarts of clover seed were mixed with the other seed and sown on fifteen and a half acres. In the fall this field was not fed off until the clover headed out, when it appeared finely covered with clover.

17. I usually mow about thirty acres, and expect two tons to the acre. This year the herds grass was killed by a frost late in May, and the estimate made was one ton to the acre. I use the variety of clover known as the "medium," and cut it when one-half of the heads are turned. At this stage, a very considerable proportion of the herds grass will be sufficiently advanced for the seeds to mature. The mode of making the hay, is to move it as little as possible. Generally it is put into cock. When the bottom lands are stocked down, clear herds grass used.

18. There is no part of my farm that cannot be plowed, except the side hills before mentioned. These side hills are in grass and are pastured.

19. I have irrigated a part of my bottom lands. For a few years, the grass was very much increased in quantity; but the herds grass disappeared, and a kind of grass took its place of but little value. I now suppose that the water was suffered to remain too long on the meadow, and thus destroyed the valuable grasses. This meadow has been plowed up, with a view to subdue it, and again seeded it with herds grass; when it is to be hoped a second experiment in irrigation may be made with more skill and better success.

The mode of watering the meadow, was by a small ditch taken out of the brook, at a point high enough to enable me to convey the water through the middle of the meadow. Lateral cuts from this main ditch, witn gates, distributed the water.

20. Of the bottom lands mentioned, about twenty acres were very wet, and may have come under the denomination of "low peat lands." This land has been thoroughly drained, with ditches from three to five feet deep. Very heavy oats were this year raised upon some of this land, and about one-half of my corn was upon this description of land. The next year, the whole forty acres are to be planted or sown to oats.

21. There have been four oxen, seventeen cows, and sixteen head of store cattle, eighty sheep, eleven horses, and thirty-three swine kept on the farm the past season, with the exception of a short time. The cattle are either thorough bred, or high grade short horns.

22. I have made no accurate and careful experiments to test the comparative value of different breeds of cattle.

23. No account is kept of the butter and cheese made on the farm, as it is mostly consumed on the premises.

24. There have been but eighty sheep kept on the farm the past season. My flock has recently been very much reduced, with a view to substitute pure Merinos. My sheep yielded a little over four pounds of wool each, for the whole flock. The pure Merino ewes, each raised a lamb, and they averaged a little over five pounds to the fleece. I think that about ninety lambs may be expected to be raised from one hundred ewes. I have heretofore raised mutton sheep, but have disposed of all my sheep whose chief value was for mutton, and intend to turn my attention to the raising wool, as the first consideration. Two dollars has been about the average price I have received for mutton sheep fattened on grass.

25. There have been thirty-three swine, of grade Berkshire, kept on the farm this year. About one-half of them have been slaughtered. Our hogs weigh from two hundred and fifty to five hundred, averaging over three hundred and fifty, when dressed.

26. No accurate experiments have been made by me, to test the value of roots as compared with Indian corn. I fatten my hogs and cattle on corn ground with the cob. Cooked for hogs, and sometimes cooked and sometimes raw for cattle, being governed in this particular by the amount of grain I am feeding. I think corn the most economical grain I can raise to feed, in view of the prices coarse grains usually bring in market.

27. There are about two hundred apple trees on the farm, most of them grafted—spitzenbergs, russets, pippins, &c.,—most of the approved varieties.

28. Pears, peaches, plums, cherries, quinces, &c., are raised in abundance for our own consumption; and we have many of the best varieties of these fruits; five or six of pears, twenty of peaches, seven or eight of cherries, and four or five of plums.

29. Various insects common to this country have depredated upon the fruit trees: the most troublesome of all, is the common apple tree worm. Strong soap suds applied by means of a piece of sheep skin with the wool on, attached to a pole is the most effectual means of destroying them.

30. My general management of fruit trees is, to prune them annually, keep them free from insects, and see personally to the selection of scions for grafting.

31. I have applied leached ashes to wheat, grass, and corn land, without being able to see any benefit.

32. Besides the mansion house, I have four houses occupied by men that work on the farm. Two of these houses have barns connected with them. In a central position is a grain barn, fifty-four feet long and forty wide, twenty feet high with a stone wall under it—making a granary and sheds. Near the mansion house are the hay barn, sheep barn, and a grain barn fifty-four feet long by thirty-four wide. Basement stories to all these buildings, furnish sheds and stables for the stock; so that every animal I winter, is fed all the valuable food in a rack or manger, and under cover.

Besides these buildings, is the wagon-house, forty-two feet long, with a basement under it; and the tool-house, carriage-house, corn-house, milk-house, smoke-house, ice-house, hen-house, &c. A small mill upon the brook grinds my coarse feed. My yards around the buildings near the mansion are all supplied with water in tubs, sent there by a powerful force pump under the mill, driven by the same wheel that grinds the feed and saws the wood.

33. The common fence on the farm is posts and boards, the posts set three fee or more in the ground. Of red cedar posts I have about three miles—and of other timber for posts, about two miles. I have something more than a mile of stone wall, made from stone quarried from the quarries mentioned. These walls are built four feet ten inches high, two and a half feet thick on the ground, and eight inches thick on top, having the same slant on both sides, and laid straight and strong. This fence costs me $1.50 a rod, and I build fifty rods or more every year, upon a system of fencing.

that in time will put an end to further expense. The board fence costs 88 to 100 cents a rod. There is a considerable portion of my fences of rails, mostly cedar, but no new rails are made. As to the condition of my fences, I would respectfully refer to the report of the committee on farms for this year, for the county of Onondaga, a copy of which report is attached.

34. Most of my fields have been measured, but sometimes more than one kind of grain is raised in a field—and thus the amount of ground covered by each kind of grain is not always accurately known. All the grain raised on the farm is measured, and the measurements entered in books kept for that purpose by proper men. The work hired by the day is entered in these books, and any other thing that appears of sufficient importance.

These memorandum books furnish most of the materials for a farm book which is kept by myself.

From the farm-book, it appears that there have been nine hundred and twenty-seven days' work done on the farm, from the 1st day of April to the 1st day of November. This account covers all the work done in drawing plaster, sowing it, drawing out manure, threshing and delivering so much of the grain in market as has been sold, and all other men's labor on the farm. There have been produced on the farm five thousand six hundred and forty-three bushels of grain, aside from garden vegetables. Besides this, sixty-six loads of hay.

As the grain is sold, entries are made in the farm book, of the price it brings; and that part of the products of the farm that is kept for home consumption, is estimated at the price it is worth in market. Thus arrived at, the grain and hay raised this year was worth three thousand five hundred and twenty-three dollars and seventy-nine cents.

I have no means of determining the value of the pasture, fruit, and many other things produced on the farm, nor the cost of team work. GEO. GEDDES.

Fair Mount, Onondaga Co., N. Y., Dec. 31, 1845.

INDIAN CORN: CULTURE OF AT THE SOUTH.

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MR. TUCKER—On the 8th page of the Cultivator I this day read an article from "A Young Planter," calling for information. I know not that I am qualified to give the desired information to so *young a planter*, as he who dates from "Eufaula;" but in consequence of that writer being a devoted friend to a good cause, and as I may possibly do some good, I will at all events try what I can do.

Allow me first to digress from the question, that I may be better enabled to have a hearing. I was absent from this place the years of 1836, 1837, 1838, and 1839; the crops of corn then made here were never exceeding an average of 20 bushels, and seldom to that extent, whether corn was cotton seeded or not. I have since made a crop of corn on 100 acres to average 30 bushels per acre, and do average 30 bushels per acre on my entire crop. As to measurement, my fields are generally square—fences placed on section lines—and where not, they have been surveyed and plotted in a farm book—done by myself, true; but as I can do such little matters, and have no interest in deceiving myself or others, I presume this will suffice.

As to quantity per acre, I have measured my wagon body, and calculated 3 square feet to a bushel of shucked corn. I have measured the same with a barrel, shucking and shelling the same. I have measured my corn cribs, and believe my measurements are mathematically correct. These are my modes of calculating; if such can be relied on, then will I proceed.

In 1838, I had determined on increasing the product of my farm, or seting fire to it and run away by the light; I procured a few two-horse plows, and instructed my overseer in their use. But as well might I have counselled with a wild goose; an overseer's interest is to make a large cotton crop at any expense or any loss. This is changing, for I can lay my hand on men that I could relinquish the control of my little matters to; enough said.

I began my improvement with deep and thorough plowing. I was not content to see fresh land on the surface, but I required the furrows to be run straight and parallel, so that there would be no unbroken strips or ridges. On my thin land, where 60 acres had produced the two years before not over 15 bushels per acre, I sowed oats, and covered with a horse rake—abolishing the plowing in of grain from that time—1840, when I returned. I cut but little of these oats. The next year I plowed well again, and again sowed to oats; this year I did not cut the third. In 1842 I planted to cotton, in 1843 and '44 to corn, in 1845 to cotton, and this year, these 60 acres are planted to corn and rye.

My general plan is, thin land two years in corn and one in cotton; good land, two years in cotton and one in corn.

I use good plows, and am as particular in my plowing as in any part of my farm operations. Never am I during plowing time without a tape line of 5 feet in my waistcoat pocket, and do not rely on eye sight, and in setting my plow to a required depth, for, after thirty years' constant control of negroes, I find whipping and scolding will not do; constant attention is the only thing. I use all my cotton seed for manure, but I have never yet manured in the hill. I use all manure from my stable, cow and horse lot, and pig sty, but not in the hill. Generally I scatter broadcast; this year in the drill. I have used all my manure for three or four years on my orchard lot, and until this year, as I said, broadcast, not for the main purpose of increasing my crop, but to improve the land, with the view of ceasing the cultivation of any annual crop saving my fruit. I do not burn grass, corn, or cotton stalks. I have in a measure ceased the turning of cattle or horses into my fields; I sow down largely of rye in corn or cotton fields for hogs and sheep; I sow from two to ten or fifteen acres of turneps yearly for stock; I never allow my work horses to be turned out during the crop year, nor even the most of the residue, as I have wagons, or gins, or plows running. I give them an occasional bite in the spring.

If feeding seven mules and 3 horses all the year, besides feeding one to five cows during winter, hogs, and poultry all the year, 120 sheep during winter, and now have enough old corn to take me to the 1st of May, is any evidence that ten hands can make corn, then our Eufaula friend may know it is done here.. In 1844, I made 3,063 bushels of corn; in 1845, I made 2,200 to 2,400 bushels, with 15 acres that my wagon was not in, save to haul two loads, the last day we hauled corn, it being Saturday evening. I could not sell corn of '44 crop at 40 cts., and concluded to gather only enough to do me. This year I have reduced my crop. I work ten hands, and average over 7 bales of 400 lbs. each per hand.

I have thus rambled over ground, that I might give other information than the mere cultivation, because I think there are other things necessary.

When I plow for corn I invariably plow deep; if not done to please me, I plow the middle out early and deep, by running a furrow in the water furrows, and plowing from it to corn with shovel plow, running around corn with a bull tongue plow.

But I will, as requested, state the general routine. If land was in cotton, I lay off rows four feet apart, and bed to it, breaking out all the land, leaving water furrow open with a shovel plow, sow corn one-half bushel per acre—this year 24 bushels to 44 acres; cover with the harrow. My corn is soaked this year in water so hot that the hand can only be borne in it, not too hot for the hand—in which tar one-half gallon to four bushels of corn has been dissolved by pouring on to it, there being about one-half gallon of salt to some 8 or 10 galls. of water, the corn remaining 12 to 24 hours, and rolled when taken out in ashes. Generally, if not wet, I run the harrow over the rows when the corn is getting up, and when the corn is old enough to have three or four leaves, I run around it with a bull-tongue plow, close and deep; I thin as soon as the corn will bear pulling, *by hand*, and hoe it directly after the bull-tongue. I do not thin out before the hoe, and do not allow the hoe to thin. I thin out to as near 20 inches as I can, preferring about 18, thus giving about 700 plants to the acre. Of this thick stand and firing I will speak hereafter.

If I have no heavy beating rains, I cultivate with the cultivator and harrow, or sometimes give a working with a double shovel-plow. I discard the turning plow from all cultivation, excepting in an emergency, which seldom occurs, as the cultivator, or harrow, or double shovel will clean five acres per day.

If I plant corn land or grain land, I flush the land, then lay off rows 4 feet deep and cover as before. I endeavor to plant and cultivate on a level, which is very nearly secured in the first, by having land bedded up over the former year's water-furrow, and in the last surely. My hills to corn are merely such as are thrown up by surface culture, and are next to no hill. One material thing towards the increase of my present crop is, when I cultivate the last time, about or before the corn is in tassel, I sow down nearly one-half bushel of peas per acre, and cover by this last plowing with the cultivator, which leaves the peas scattered pretty well throughout the middle. This crop shades the land, and gives a very heavy crop of vegetable matter to be plowed in.

Now about the thick stand and close planting. My object is to shade the land early, and prevent the evaporation of the moisture. I planted last year land to corn that was cleared in 1838, cropped every year since, with no manure at all until 1842; the land is level, and was, when cleared, thin land. I planted it 4 feet by about 18 inches, and the crop was nearly if not quite 50 bushels per acre. It fired it is true, but the drouth was very severe, and, by the by, it had been manured for the two preceding years with cotton seed scattered broadcast—a manure that will fire corn in a dry year. I have planted thus for five years, and have averaged on high land, where the overflow of creek or river did not reach, full thirty bushels since I have adopted this plan. Previous to 1840, I planted corn 5 feet by two feet, and never made the crops I have since. I see but little more fired corn than previously. A neighbor* of mine planted last year two acres to corn three feet by one, land highly manured broadcast with cotton seed, turned under about 5 inches. The crop fired, but not more than the other parts of his plantation; but no matter, for he made 98 bushels of corn from a measured acre, and the corn was measured. He is a neighbor that I have known for twenty years, and will risk my right arm on his veracity. This thing was never believed there before, he believing on distance, and it was planted at my request. Did our Eufaula friend ever see corn fire as bad in a garden where there was deep tilth, as in the same tilth in the field? The garden was cultivated with the hoe, the roots not "all tattered and torn." I may allude to another friend in an adjoining county,† who made over 100 bushels, if I remember rightly, by planting in drills 3 feet by 1. No manure.

I presume our Eufaula friend does not mean to be particular as to a planter who has 100 to 150 acres in corn, and that the experience of one who plants 75 acres will do as well. I have averaged 30 bushels an acre on 100 acres, and risking not being believed, I fearlessly state the result. I am so far from thinking that I have done great things, that I feel I have not done all I should do, and will not be content until I have brought my entire crop to an average of 50 bushels per acre. I can do it I am satisfied, and without dropping a pound of my average of 7 bales of cotton, averaging 400 lbs. each.

I have been laboring for the last 6 years in endeavoring to induce my brethren of the plow, to examine for themselves, to attend personally to their own business, and to apply the best energies of their minds to their calling. And I entertain a hope that this call from my Eufaula brother, was brought about by a private letter; if it is so, I am proud and happy to answer it publicly—referring in confidence to my numerous visitors and intimate friends as vouchers for my good intent.

I trust the importance of this matter will be an ample excuse for my having written at such length. I might have merely answered the query, but I felt that to do all the good I aimed at, I should make other statements. And rather than leave a stone unturned, I beg to make a statement. This place was under the control of what were considered good and experienced overseers for several years, and as they had failed to grow 25 bushels per acre, and had given distance, I was ridiculed as being wild and theoretical in daring to attempt an improvement; "a *Dr.* to teach,"—and as my friend "Coke" says to me in a private letter, "they even deny the improvements they see." But in the teeth of all opposition, not a visitor dare now deny but I have made a great advance. I am not vain, am past being "tickled,"—have had so much that the salt has lost its savor, but I say this to encourage others to persevere in well doing. If I am not mistaken in my Eufaula brother, he may be a younger planter, but an older man, though I have been an "old man" for 30 years, it being my school-boy nick name. At all events I am his and your friend, M. W. PHILLIPS.

Log Hall, Edward's Depot, Miss., March 28, 1846.

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NOTE.—In connection with the above communication, we received a letter from ALEXANDR MCDONALD, Esq., of Eufaula, Ala. It seems that *Dr. Phillips* was under the impression that Mr. MCDONALD wrote the article signed "A YOUNG PLANTER," in our number for March last, (page 86.) Dr. P. therefore first sent the above communication to Mr. McD., with the request that, after perusal, he would forward it to us. In reference to it, Mr. McD says—"I infer from his (Dr. P.'s) letter to you on the culture of Indian corn, that he supposes me the writer of the piece signed "A Young Planter," on page 86, current vol. of the Cultivator. My friend is however mistaken. I have at no time appeared in our agricultural papers, only under my proper name; indeed I have long thought that all who write, should do so under their true names. I forward Dr. P.'s communication to you most cheerfully, believing as I do that no man is better calculated than he to throw light on the important subject therein treated of."

In relation to the product of corn-lands in different sections, Mr. McDonald observes—"It is not at all surprising that we find farmers in the vallies of the Mississippi, Wabash, &c., cultivating lands which produce 100 bushels of corn to the acre, while on our light, sandy soils we gather but ten to fifteen bushels per acre; but it is surprising that we should be content with the ten to fifteen bushels per acre, and not make an effort to increase the quantity. I have taken the same view of the subject that I find my friend of Mississippi has done, that is, either to improve my land or abandon it."

As to means of improvement, Mr. McD. thinks the lands in his section must be highly manured. "Believing so," he says, "I have, since the first of last January, hauled out and spread over a portion of my farm about forty thousand bushels of compost manure. So soon as I manure my lands, I propose to plant closely. My experience is in favor of close planting where the land will bear up under it; but I have seen several fields of corn entirely ruined by close planting."

DRIED STRAWBERRIES.—Last summer, by way of experiment, when strawberries were plentiful, the writer attached threads to their stalks, and hung up a few which were over ripe to dry. I placed them inside a window facing the south, where they have remained from June last until the present time (March 28.) They have just been tasted, and the result is most satisfactory. That sweet refreshing acid which is peculiar to the strawberry in full perfection; the flavor of the fruit without any watery taste, is delicious. The strawberry thus dried is a stomachic.—*London Far. Jour.*

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* A. K. Montgomery, of Hinds county.

† R. Y. Rodgers, of Warren Co.

REMARKS ON THE GRAIN-MOTH,

USUALLY TERMED THE FLYING WEEVIL, OF THE MIDDLE AND WESTERN STATES.

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Luther Tucker, Esq.—About six months since, when sending on the amount of my annual subscription to your valuable paper, I remarked, that if you wished it, I would contribute some facts regarding the Flying Weevil. Since that time I have still continued to study the habits of the insect, in order, if possible, to discover some remedy for the evil, as our wheat crops, in this part of the country, during the years 1844 and 1845, had suffered severely. Although the article was written some months since, detailing the then ascertained facts, I delayed sending it for several reasons: On some points regarding the insect I was still uncertain, and desired to make further experiments. I had also written to Mrs. Say, requesting to be informed whether Mr. Say, while he resided here, had described the insect. Although I have received no answer yet to this inquiry, I hasten to forward such facts as have come under my observation, (without however any accompanying drawings of the insect, as I had intended,) because a friend has just put a number of the "Prairie Farmer" into my hands, by which I perceive that Dr. Harris has already received specimens of the insect, of which he has also made drawings, in all its stages, and calls for farther information. My first idea on seeing the paragraph was, that the subject being now in such able hands, any communication from me would be useless; but on second consideration, recollecting that, here, we have an opportunity of inspecting the depredations of the living insect on a large scale, I have concluded to send you such a description of the insect as my limited knowledge of Entomology permits me to give; which, if not scientific, will, I trust, be found sufficiently accurate to enable my brother farmers to detect the enemy when it exists in their crops. To this I shall add, on the habits of the insects and the nature of their depredations, such observations as have been collected by enquiries from others, or made personally; concluding with some account of the *usual* remedies for the evil, and a suggestion as to a *new* and if efficacious, easily accessible remedy.

In giving the result of these examinations and experiments, I shall, for the sake of clearness, even at the risk, nay almost certainty, of being considered tedious, put them as answers to questions, such as I should expect persons, unacquainted with the insect and only imperfectly acquainted with entomology, to propose for the sake of information. I shall also endeavor to distinguish rigidly between ascertained facts and mere conjecture or opinion, however such opinion may be warranted by circumstantial evidence.

I. *What is the insect like? What are its external characteristics?* To the readers of the Cultivator it may perhaps be well to mention first what insects (already described throughout the various volumes of that work) it is *not*; and this may afterwards facilitate the reply saying what it *is*.

It is *not* the Wheat-worm or Weevil of the eastern states, spoken of at pages 23, 73, and 98 in the first vol. of the second series of the Cultivator. *Nor* is it the Wheat-fly, (*Cecidomyia destructor*) of Great Britain, Canada, and other portions of country, described at page 05 of the above volume. It is *not* any one of the enemies of the wheat crop mentioned in the 3d volume of he Cultivator at pages 65, 111, 118, and 129.

It is *not* the Black Weevil (*Curculio granarius* or *Calandra granaria*) described in the 5th vol., page 121, with which most farmers and millers are well acquainted. *Nor* is it the Grain-maggot spoken of at page 157 of he same volume.

It is *not* the Grainworm of Western New-York, described in the 6th vol., at page 43.

Nor is it the European Grain-moth (*Tinea granella*,) mentioned in the 9th volume of the Cultivator, as having been described by Dr. Harris, in his work on the insects of Massachusetts, injurious to vegetation.

Then what is it? The insect in question having in its perfect state, four scaly or minutely imbricated wings, a spiral tongue, and a hairy body, *is certainly* a Lepidopterous insect. That is to say it belongs, according to the Linnæan arrangement, to the

Order Lepidoptera,

which contains three genera; the Butterflies, the Hawk-moths, and the Phalænæ, or Moths.

That the ravages here in the wheat are committed by the worm or larva of a Lepidopterous insect no one can doubt, who has seen as I have, the myriads of moths flying about the grain and threshing machine, while threshing out the crop of 1844, and some few in that of 1845; hence the popular term applied to them of *Flying Weevil*, as we never see the common black weevil *flying* about our wheat. It is they only, however, of our wheat enemies which are properly *weevil*; as that term is applied by Entomologists, only to a genus of the Coleoptera or hard winged insects, of which the black weevil (*Curculio granarius*) is one species. [Why these black weevils having wings do not fly, I cannot say, but this I can testify, that during seven years, while I had daily opportunity of examining them; and part of which time we were much annoyed by them, in our mill, especially in warm weather, I never yet saw one on the wing, or met with an individual who ever remembered to have seen one of them flying.]

We have an additional proof that these moths are the insects in question. I have several times hatched them out of wheat and corn under large tumblers, and here also frequently found the moth, on dissecting the grains of wheat, just ready to emerge from the pupa case; while in other grains of wheat, I have perceived the moth arrested in its progress, probably by cold weather, half way out of the opening, which is invariably found near the apex of the grain, whenever the insect has completed its metamorphoses, and has left, or is about leaving its dwelling.

Our insect belongs, farther, to the

Genus Phalæna, Moth;

because its antennæ become gradually smaller from their base to their tip, instead of which those of butterflies are largest at the outer extremity, generally ending in a knob; and because its wings are not vertical, as in butterflies. Another proof of its being a moth, is that, when you view a large heap of weevil eaten grain, in a mill, (without disturbing the grain) you usually only discover the insects *in the day time*, on pretty close inspection; while on surveying them *at night* with a candle, you are surrounded by them, showing that, like most moths, they prefer flying by night.

The moth genus is sub-divided into 8 groups, families or sub-genera, among which are the *Noctuæ* or Owlet Moths, and the *Tineæ*, (Destroyers of household stuffs.)

After repeated microscopical observations, believing that I found the tongue of the insect somewhat long, horny and projecting; farther that the thorax seemed crested; the feelers distinct, with the lower joints compressed and the upper naked and cylindrical; and that the wings, when at rest, were deflected, I inclined to place our moth among the *Noctuæ*.

But having latterly, through the kindness of Prof. Norwood, of Madison, had an opportunity to consult Dr. Harris' work, I perceive that he thinks that the fly-weevil of Col. Carter, of Virginia, (evidently our flying-weevil,) will prove no other than the destructive Angoumois moth, (one of the *Tineæ*.) This insect ravaged a province of France of that name, situated near the west coast in about latitude 46, many years since; and a description of it, as given by Duhamel, will be found in Dr. Harris's work, at pages 366 and 367.

Now I am aware how difficult it is for one like myself, not versed in entomology, to decide whether the minute tongue of an insect is projecting and horny; or prominent and membranaceous, (these constituting in the Ency. Brit., article Entomology, the grand characteristic differences between the *Noctuæ* and *Tineæ*) with other such intricate details. And therefore, although I am aided by a tolerable microscope, one lens of which magnifies the surface of objects, by my estimate, if correct, about 4000 times; still as Dr. Harris now has the insect to examine for himself, I shall not venture an opinion, with regard to the species, except to say that as far as my knowledge extends, his description of the *Anacampsis cerealella*, (Angoumois Moth,) comes very close to that of our moth. In some particulars, perhaps unimportant, however, the description does not, I think, quite apply.

I shall nevertheless submit, with all due humility, as the result of my investigations on the insect in question, in its various stages, the following detailed

Specific Characters.

The Egg.—The speck found on weevil-eaten wheat, on the upper margin of the heart, (*corculum*, or oral spot near the base of the grain, containing the future germ, surrounded by a soft and somewhat waxy material) although just visible to the naked eye, presents, under the microscope, the appearance of from 50 to 100 minute, irregularly-ovoid grains, (somewhat resembling rice,) apparently of albuminous matter, enveloped in a thin pellicle or membrane. From this speck being almost always exactly at the lower orifice of the cavity commenced by the worm, and from its otherwise resembling the eggs of insects, I have always felt confident that this is the egg or eggs, although I cannot detect the living embryo for want, I suppose, of a more powerful lens. At first I supposed the whole only one egg, as it seemed but little larger in proportion to our moth than the egg of the common silkworm moth does to its parent. But, from the fact that these grains can be separated under the microscope, by the point of a very fine needle, I believe the speck will prove to be a *cluster* of eggs. Even after the worm has commenced its operations, this speck still presents the same external appearance. The membrane seems only to burst below, and allow the escape of the worm or worms as circumstances may require, and still retains its membraneous covering, which is not affected by water, as nearly as I can ascertain, unless it be boiling, or nearly so. Why there should be so many eggs in reserve, I cannot say; but sometimes I have found a cluster deposited on nearly every grain which one ear of wheat contains.

The Larva is naked, of a dirty white or yellowish color; feet 16 in number. (The first pair of prop-legs is however so minute that it is very difficult to decide, without some possibility of error. There may, therefore, only be fourteen feet.) From one specimen, taken out of corn, when examining its mouth with a needle, I found I could draw a very minute thread. Of this spinning power I could not at first perceive that they made any use; but on close inspection, I observed that the worm just before changing into a chrysalis, seems to shove all its excrementitious deposit to one side and downwards in the old cavity, and then weaves a thin, white, web-like partition, neither vertically nor horizontally, but rather obliquely through the channel, so as to separate the deposit from the chrysalis; the latter being always found with its head towards, and not far from the opening at which the future moth emerges.

Under the microscope, the larva has very much such an appearance as the grub of the cockchafer, (or May-bug,) so often found in our gardens, presents to the naked eye.

The *Pupa* is brown, (becoming darker as it approaches its final transformation,) smaller at each end than in the middle, and not enveloped in any covering.

The Moth or Perfect Insect.—Measuring from the head to the extremity of the wings, the moth is usually three-twelfths of an inch long, or in specimens taken out of corn, four-twelfths of an inch long, and one-tenth across. The antennæ, when highly magnified, appear somewhat moniliform, (resembling a necklace,) setaceous, (tapering from the base to the extremity,) and sometimes nearly as long as the body without the wings. The head is usually furnished with two *palpi*, (feelers,) bent back; second joint naked and cylindrical. (Some specimens certainly have no palpi, but whether such are uniformly of one sex or the other, I cannot decide. I have found palpi on both sexes.) Tongue spiral, longer than the head. The wings extend frequently some distance, at least one-tenth of an inch beyond the abdomen, particularly in the male, whose abdomen is considerably smaller than that of the female. The *upper* wings are of a color which I think generally speaking would be called gray; but probably entomologists might call it cinereous or ash-colored; where the wings approach the thorax, however, they have more of a bluish tinge, and towards the tips a yellowish tinge; the whole upper surface exhibits a brilliant lustre, resembling satin. The *lower* wings are darker, inclining to brown, with a broad fringe. When at rest, the wings are somewhat deflected, that is, sloping like the roof of a house. The female is furnished with an ovipositor, which seems capable of being thrust out a considerable distance. Viewed from above or beneath, this egg sheath appears as thin as the edge of a knife blade, but when seen from either side, it presents considerable width, and has on one side an opening, through which, I presume, the eggs are forced out, with the accompanying viscid matter, to attach them firmly to the grain.

This description will, no doubt, appear to many of your readers very dry, and the result very small after so much labor. But I can assure my brother farmers that, to me, the investigation has been full of interest; and I can safely add my testimony, in confirmation of the recommendations, which many have given, of the use of the microscope. It is an instrument calculated to aid us materially, in some portions of our agricultural investigations, (particularly among the animal and vegetable enemies of our crops;) and withal, admirably adapted (when we are contemplating the minute and, but for these lenses, to us invisible world,) to excite our admiration for Nature's works and her immutable laws.

II. *Where is the insect found?*

1. In what kinds of grain?

As far as I have been able to observe for myself, or ascertain from others, in this neighborhood, it never attacks rye; a neighbor informs me, he has found it in oats; and I have found it abundantly in wheat, barley, and Indian corn. (The insect found in corn does not differ in any essential, that I can discover, from that found in wheat; it is usually somewhat larger than the specimens from wheat, but this may be owing to the greater amount of nourishment which the grain has afforded, a grain of corn being so much larger than a grain of wheat.)

2. In what portion of the grain is it found?

The egg is found, as already remarked, on the outside of the wheat, and most generally on the upper margin of the heart, somewhat above the point from which the plume, or infant stem ascends. This being the softest and most easily perforated portion of the grain, the embryo grub, after bursting the under portion of the egg, seems to find no difficulty in entering the grain. Sometimes, however, I have found the egg in the groove of the wheat, but the grub seems to find its way round to the heart, before it commences its attacks. As the larva increases in size, it eats itself a channel lengthwise of the grain, devouring nearly all the farina, until it reaches the upper end of the wheat or corn, when it prepares itself to change into a chrysalis. It leaves the outer skin of the grain, as a covering to the orifice of its cavity, and this is readily burst by the perfect insect, when it is ready to issue forth. By examining this skin, and ascertaining whether it has or has not been burst open on one side, and left like the open clapper or valve of a pump, you can always learn whether the insect is still in, or gone from a perforated grain.

3. In what latitude is it found?

Until the years '44 and '45, the moth had not prevailed, perhaps not even appeared in this latitude (38°) for 15 or 16 years. I have been able to hear of its ravages as far north as Columbus, Ohio, and am informed that the moth prevails more or less every year in Tennessee, and as much farther south as wheat is raised. For the truth of this statement I cannot vouch. The probable northern limit, however, seems to be about 40°. The extent of country then which they damage must be very great; probably it embraces Virginia, Kentucky, and Tennessee, the south portions of Ohio, Indiana, and Illinois, and perhaps parts of North Carolina, Missouri and Arkansas.

As to the amount of cold which the larva can endure, I will give the following fact. Last winter, finding some sheaves of wheat, which had accidentally been thrown at the bottom of my barley stack, I threw them on the barn floor for examination. They remained there several nights, during one of which the thermometer fell to 0° Fah. On examination, I found some of the larva still alive. But among those heads which I reserved for hatching out, I can now discover few if any larva but what look dark and shrivelled; and consequently, I suppose, are mostly dead. Whether this arose from the cold continuing too long for them I shall not decide; but I think it highly probable, that we shall not be troubled much with them, this season. Should they make their appearance, I will keep a sharp lookout, and may perhaps report progress.

III. *When is the insect found in its various stages?*

The egg, or cluster of eggs on the wheat, seems to be deposited on the standing grain by the moth, late in May or early in June, in lat. 38°. As some proof of this, we know that weevils were found early in May, 1845, in the mills here, hatched out of grain in bulk, of 1844. This shows that they were parent moths, ready about that time, to deposit their eggs. My wheat which proved infested by weevil, we commenced cradling when somewhat green, on the 14th of June, and in about 14 days afterwards, most of it was closely stowed away in my barn, the heads all inwards, as in stacking, so that it seemed impossible for a moth to penetrate. There seems every probability from these and other facts, to be enumerated hereafter, that the eggs were deposited previous to this time, and not in the stack or barn, although I regret that my want of sufficient knowledge then of the habits of the insect, prevented me from detecting the moth, (as I think I might have done, very late in the evening or during the night,) busy at the work of destruction, among the standing grain.

Some of the later hatched individuals of this generation must be in existence a month or six weeks later than the above. This is proved by my finding some early corn, which, if I estimate correctly, was fit for their work about the middle of last July,) much weevil eaten, while my late corn escaped almost uninjured.

The early corn was from New-Jersey seed, and was planted, I see, by reference to my farming journal, on the 14th of April, and some of it was ripe enough on the 1st of August to be again sowed broadcast, and made excellent fodder; consequently it was probably in roasting ears about the middle or latter part of July; but of this unfortunately I made no memorandum. Perhaps, in our latitude, finding all the wheat harvested, and stacked too closely for them to penetrate to the ears, they commenced on corn, possibly in its milky state. One fact, however, seems to indicate that they wait till a later period, when the husk is already dry enough to open somewhat. It is at all events an additional argument for supposing that they prefer easily accessible situations, such as standing grain for deposition of their eggs. I invariably found that all ears of weevil eaten corn (maize) had most grains perforated near the top of the ear, where the husk is usually somewhat open, while the but-end generaly escapes; and again, ears of corn which have the husk very tight and close at top, scarcely suffer, while those ears which when harvested, showed their husks well opened, are sure to be found the most weevil eaten.

On wheat, since I knew the exact spot to examine, I have usually been able to find the eggs, as I before remarked; but on corn, they have so far eluded my search. Last year, when harvesting some corn late in October, I found the moth sometimes wedged in between two grains, generally head downwards, sometimes flattened between the husks, with occasionally a hole perforated through several folds of husks, corresponding with the orifice of an empty grain. These moths, I may here remark, as well as the myriads hatched from the new wheat early in the month of August, constitute the second brood or summer generation. As proof that the above is about the period to look out for them, I will state that in 1844 I commenced threshing the product of forty acres on the 2d day of September. The wheat was all weevil-eaten, and being unfit for bread, was sold to a distillery. In 1845, having a smaller crop and knowing more about the moth, I watched it narrowly, and deeming it safest, commenced on the 1st of August to thresh; on the 11th I had some of the wheat ground. and it made good flour; on the 29th of the same month, I took the last to mill; this proved slightly weevil eaten. Those of my neighbors who did not have their wheat ground until some weeks later, could not use their flour. Thus the hatching process and growth of the larvæ seems with us to take place early in August.

IV. *What is the nature of the injury done by the insect?*

The perfect insect probably does no harm; but lives like other depidoptera, on the nectareous juices of flowers. The mischief is done by the larva or grub, which deprives the grain of most of its farina.

The cluster of eggs is found, as already remarked, on the external skin or bran of the grain, protected by the plume or husk. Thus those eggs on wheat, which had been threshed out, (being chiefly rubbed off) evaded my search; but as soon as I carefully drew back the husk in ears of unthreshed grain, I could generally find them. The channel formed by the larva may be traced even at the earliest periods of its attack, by using the point of a pen-knife, and will be found almost invariably as formerly described, to commence in the soft part of the grain, at or near the upper margin of the heart, the insect devouring a portion of the grain which may be compared to the albumen or white in the egg, but generally leaving uninjured the vitellus or yolk, which envelopes and nourishes the plume. [This accounts for weevil eaten grain growing; although for want of nourishment it generally makes a weakly plant. I am aware that Duhamel and others have stated, in speaking of the Angoumois moth, that the grain will not grow; but I will state why I think it correct. I have myself sowed wheat which seemed perforated in nearly every grain, at the rate of two bushels to the acre; and had about as thick a set as I usually have from one bushel and a half of good wheat. I do not say my experiment is conclusive; but neither can I without farther experimental testimony, believe that there were sufficient of sound grains in mine to make such a set. Many of my neighbors have experienced the same result in sowing their wheat; as we could with difficulty obtain any seed not weevil-eaten.]

The larva continues to eat out the farina from the above mentioned entrance, through to the apex and increases in size during probably some two or three weeks. If the weather or other circumstances are unfavorable to development, I think some of the larva of this second brood do not undergo, or at least, complete their metamorphoses until the following spring; but, if the weather is warm, they will fairly swarm, contrary to Duhamel's account. In fact, this constitutes the main crop, if I may use the term. The old grain gave birth as we have seen, probably in May, to such as had escaped the rigors of the winter, (and furnishing enough at all events to impregnate the standing grain;) the new wheat then gave birth early in August to the large swarms; and as these are but short-lived it must be individuals only of this generation that have been casually retarded, which live in the egg, grub, or chrysalis form until the year following.

How long the summer brood remains in the *chrysalis* state I am not certain, but believe about two or three weeks.

Now if during the early stages, after the hatching of the worm, the wheat be ground into flour, we of course grind up many larva, and have a clammy heavy flour; while later, even if the perfect insect has left the grain, the external covering of the chrysalis and the deposit of the larva necessarily ground up with what little farina is left, renders the flour very bitter and revolting; at least to modern Anglo-Saxon stomachs, unaccustomed to eating birds nests and similar dainties, or unacquainted with the peculiar relish afforded to some palates by broiled locusts, (as in Gambia,) or grubs picked from the bark of trees, as reported of some in the West India Islands.

Our weevil-eaten wheat is besides considered unwholesome, and several protracted cases of intestinal derangement have been traced apparently to this source. The longer the wheat is kept on hand the more it deteriorates, until at length a bushel will not weigh, if I remember correctly, over 45 lbs. The price being one-third, perhaps one half lower than that of good wheat, it is evident that a crop of weevil-eaten wheat when sold at 60 lbs. to the bushel, will realize for its owner considerably less than half the amount which good wheat would have brought him. In this state it is purchased by distillers; and as fire and fermentation are said to purify all things, it is hoped, before it appears in the shape of spirituous liquors, fermentation has done its duty in neutralizing the effects of our four winged foes. Should, however, any evil result to those using the beverage, it would be hardly fair to convict our ill-fated moth of all the mischief; as King Alcohol ought to come in for a fair share.

V. *What is the remedy?*

After all, this is the important question. The ascertaining of the species, the investigation of its habits, the determining the position of the egg, and time of its deposition, &c., although interesting in themselves, are chiefly useful as furnishing data for a remedy.

I shall speak first of those remedies in general use.

1. *Scalding* has been practised here successfully. Baskets of grain are dipped into kettles of boiling water for a few seconds, until the water soaks through; the grain is then spread out thin to dry in the sun, on boards or sheets. But the drying is tedious, troublesome, and expensive, especially when there is a succession of wet weather; The flour of scalded wheat, as far as tried here, was excellent; but an experienced miller remarks, that the scalding, by thickening the skin, would considerably increase the bran, at the expense of the superfine flour. This, in merchant mills, if found to be the case, might be sufficient of itself, to prevent its adoption.

2. *Kiln drying* was employed successfully in France. Dr. Harris says a temperature of 167 degrees Fahrenheit continued 12 hours; or 104 degrees continued two days, will kill the insect. Kiln drying possesses the advantages of ensuring the keeping quality of the flour; but the heat requires great care in its regulation. Besides, here they charge five cents per bushel for the operation; and it is only rarely that suitable kilns can be found through the country.

3. *Salt*, as a preventive, has been recommended; it was even asserted that to put wheat into a barrel and place on it a pint of salt, would prevent the insect from damaging the grain. Whether the salt could have any effect by somewhat lowering the temperature, or whether some other circumstances, in the threshing or storing of the grain was the cause why it appeared, as asserted, less weevil eaten than that which had not been salted, I do not pretend to decide. But of this I am certain, that among those who said they succeeded by this means, none so far as I could learn, had put away two portions treated exactly alike, except that the one *had*, and the other had *not* salt over it. I consider the question, therefore, as the president says, in the debating societies, still "open for discussion" or what is much better, for experiment.

4. *Sprinkling with Lime.*—The incorporating thoroughly of about 1 bushel of lime with 100 bushels of wheat, when putting away the latter, in the garner, was here at first supposed efficaceous. But one fact, well ascertained, is worth folios of suppositions. A neighboring farmer mixed lime with his wheat, in 1844, stirred it and sunned it repeatedly. This wheat kept unusually well, but few weevils hatching out. Being however a shrewd man, he, in 1845, resolved to test the matter fairly. One portion of his wheat he stirred and sunned *without* liming it; another portion he *limed*, but did not stir or sun it. The first saved well; the latter was much weevil eaten. These particulars I ascertained personally from him, as I went to him purposely to know. I do not pretend to decide, whether stirring the wheat rubbed off the eggs before they could hatch, or whether the power of our meridian July sun is sufficient to destroy the embryo life in the egg, or whether the effect is produced by some other cause; but the fact that early threshing, stirring, and sunning, seem tolerably effectual, in some way or other, is strongly corroborated by most of the testimony I have collected on the subject.

5. *Time of Sowing.*—I cannot ascertain that late or early sowing of wheat, has any effect in increasing or decreasing the evil.

6. *Untried Remedy.*—Finding the eggs on the spot already mentioned, outside of the grain, and perceiving, also, that by dry friction between my hands, of some 40 or 50 grains, the eggs rubbed off pretty readily, it occurred to me that this might be done on a large scale. This, I regret to say, I have not had an opportunity of testing in practice, but I have learned various facts, which I think render it probable that the purpose would be fully accomplished by rubbers, (small mill stones, turning very rapidly, and set far enough apart to rub, but not bruise the grain,) such as are used in Virginia and other large wheat-growing districts. Perhaps the same object might be effected by a smut machine. The facts are these: Rubbers, I am informed by experienced Virginia millers, and smut machines, as asserted to me by a stranger, (of whose correctness, therefore, I have not the means of judging,) will rub wheat until the grain is thereby deprived of the downy pubescence at the apex, familiarly, I believe, termed, "fuzz." Rubbers or smut machines are almost absolutely necessary to ensure first rate flour; more especially in the west, where so much grain is got out on dirt floors. So that, should rubbers prove efficacious against weevil, the outlay would be no new, or otherwise useless expense. I am farther informed, that three feet rubbers could be made to clean or rub 1000 bushels in a day. In this case, I estimate that the expense of rubbing ought not to be over *one cent per bushel*. To this expense any farmer would gladly submit in a weevil year, to secure his crop from being worm-eaten.

But to ensure success, he must, if my views be correct, examine the grain attentively at harvest time, and if there be signs of eggs, thresh out his grain as soon as practicable, certainly not later here than the latter part of July. He may then take it to the rubbers, pay his rent—a bushel—and bring it home to his garners; or what he has to spare, the miller or merchant would then readily buy of him, if once the operation is proved to be effectual in preserving it. An intelligent carpenter here says he has been for sometime thinking about, and he believes has contrived, a new kind of smut machine, which he attaches to the common wheat fan or winnowing machine. Should this prove the case, of course the farmer might rub his own grain free from weevil, without going to mill.

Should all these remedies fail, I have another *corps de reserve*, which, I will mention, although I fear it will prove a "forlorn hope."

In no instance, when dissecting grain, did I find two similar worms in one grain; but I occasionally found our worm *hors de combat* or nearly so; the juices of his body extracted, and a smaller worm alongside, revelling in the spoils. The latter had a shape somewhat like an hour-glass, contracted in the middle, but enlarging both ways until the extremities again become pointed. This fellow was fat enough. Occasionally I detected similar larva farther advanced, and finally changed into small black flies, of which some farmers had noticed large numbers, among the "tailings" of the winnowing machine. They supposed them a new enemy; but I am much mistaken if they do not prove friends, instead of foes; being no other, I imagine, than a species of ichneumon fly; (similar probable to the *Ceraphron destructor*, which preys on the European Grain-worm.) It is true, their assistance does not arrive before the wheat is injured for flour, but they might aid in diminishing the enemies' ranks for the next season.

I hope your readers will do me the justice to admit that, if I have made this article twice as long and tiresome as it should be, I have at least duly interlarded it with "possibly," "perhaps," "as nearly as I can ascertain," and the like. This I do, partly, in order that, should Dr. Harris, or any other close investigator, detect me in error, I may be able to secure an honorable retreat, without danger of losing my character, as an accurate experimenter, or of being totally excluded from your columns.

But seriously, when we consider how difficult it already is to separate truth from error, and how impossible for each individual to determine, by personal investigation or experiment, the truth or falsehood of each asserted fact, it seems highly important (at least if we desire to advance knowledge in the world,) that statements made to the public should never be given as *decided* facts, unless warranted by repeated experiments. Even then we shall have errors enough; without this precaution, we must expect to have "confusion worse confounded." RICHARD OWEN.

New-Harmony, May 4, 1846.

P. S. If you desire it, I can still send you drawings of the insect, in its various stages; exhibiting the moth of its natural size, and showing the appearance of the head and ovipositor, when magnified.

May 10. This morning, although the thermometer is at 65 degrees, I found two moths, contrary to my expectation, ready to hatch out of corn; one of them had its antennæ and part of its head out of the orifice, apparently reconnoitering the prospect. I extricated them both, by splitting the grains of corn, and found one of them encumbered with the pupa case; the other, on the contrary, rather to my surprise, was enveloped in a white, web-like casing, which, except in this instance, had always appeared to me to be used only as a partition in the channel, not as an envelope for the chrysalis.

[We should be very glad to receive the drawings offered.—ED]

PRINCIPLES OF BREEDING.

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WE have been several times requested to say something in regard to what is called "*in and in*" breeding. We are by no means confident, however, that any remarks of ours can throw light on the subject; though often discussed, it is still involved in intricacy. In endeavoring to understand it, the first point to be settled, is the precise meaning of the term "in-and-in" breeding. It seems to be understood variously—as some suppose it to apply to animals of any degree of relationship—others apply it to breeding from the same *family*, without particularly defining the affinity of blood which animals bred together should possess to justify the use of the term. Thus they regard the produce of father and daughter, or mother and son, as animals bred in-and-in; using the same term in this case as they would do in reference to the produce of brother and sister. But a strict definition is evidently necessary, otherwise the use of the term is wholly random, and its signification so uncertain that it conveys only a vague idea.

What, then, is in-and-in breeding? Sir JOHN S. SEBRIGHT, in a letter on the "Art of Improving the Breeds of Domestic Animals," published some years since by the British Board of Agriculture, considers the term to signify breeding from animals of *precisely the same blood*. This is an intelligible, and we believe correct definition. It has also been assented to, and its adoption advocated with force, by JOHN HARE POWELL, Esq., a citizen of our own country, who has in times past been eminently distinguished as a breeder of stock.

Upon the basis of this definition it follows that no course of breeding can be strictly in-and-in except that which results from coupling animals of exactly the same blood, and this, probably, can rarely happen but by an union of brother and sister, or of animals which were originally derived from such an union. Where the original male and female were of different families, it is obvious that the offspring does not possess the same blood of either of the parents, but has just half the blood of each. The produce of this offspring and either of the parents, would be three-fourths of one of the first pair, and one-fourth of the other. The next generation, bred in the same way, would be seven-eighths of the parent. the next fifteen-sixteenths, and so on; the blood of one of the original ancestors increasing and the other diminishing in this ratio with each generation. This and similar courses of breeding have been aptly denominated "*breeding in*;" and the term "*close breeding*" is also more or less applicable, according to the nearness of relationship existing between animals coupled together, or according to the extent to which breeding in is carried.

Having settled what is to be understood by the term "in-and-in," we will proceed to consider the expediency of that course of breeding. And it may be observed in the first place, that although many distinguished breeders have advocated and followed, more or less, breeding in, or close breeding, very few, if any, have recommended in-and-in breeding, *as here defined.** The effects of the course when carried on for several generations, cannot perhaps be better described than in the language of SEBRIGHT, in the essay above referred to. "I have," says he, "tried many experiments by breeding in-and-in, upon dogs, fowls, and pigeons; the dogs became from strong spaniels, weak and diminutive lapdogs; the fowls became long in the legs, small in the body, and bad feeders. * * * Indeed I have no doubt but that by this practice being continued, animals would, in course of time, degenerate to such a degree as to become incapable of breeding at all."

It is a maxim in physics that an effect is not produced without a cause. Hence it is natural to ask a reason for the ill effects alleged to be produced by in-and-in breeding. We will endeavor to give one, which, though not entirely original, is in some respects different from any we have seen offered.

It is admitted that different families of animals have certain hereditary tendencies. The proneness to particular diseases in families of the human race, is evidence of this. Now it is plain that where two animals of the same blood and the same hereditary tendencies, are coupled together, there would be a greater liability in the progeny to exhibit any defect or disease which belonged to the family, than there would be if only one of the parents had this constitutional tendency. Hence we see the defects of parents augmented in the progeny.

This we believe to be the true cause of the degeneracy which ensues from in-and-in breeding. But let us not be misunderstood. It is not merely the *nearness of relationship* which produces these consequences; for we can readily believe that they might follow where the parents were not at all connected by consanguinity. The animals might belong to families wholly distinct, and yet their hereditary tendencies be similar. For example: let there be chosen a bull and cow wholly unrelated, or even of different breeds, each of which has disease of the liver to the same degree, and each also an equal hereditary tendency to that disease; the progeny generated by two such animals would no doubt have the same predisposition to the defect or disease of the parent as if both the latter had been of the same family. Thus the degeneracy of offspring is not owing to the relationship, simply, but to the natural defects of the parents or ancestors. The skillful breeder will therefore select his animals for propagation with a view of avoiding defects and increasing excellencies in the progeny.

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* It is proper to remark that breeding *in* when carried to a certain extent, may be expected to produce results similar to those of breeding *in-and-in*; that is, the consequences of the former will resemble those of the latter system, in proportion as the blood of the animals bred together becomes similar.

But it may be said that excellencies as well as defects are transmissable hereditarily; and as animals of near relationship are sometimes found which possess certain valuable qualities in a greater degree than they are to be found elsewhere, the question is suggested—Why not permit these animals to breed together? This we should be in favor of to a certain extent; but the animals should be selected with judgment, and with particular care that they have not a predisposition to important defects. It will not do to rely on the idea that their good points will overpower their bad ones; for as their superior points or qualities are probably the result of art or accident, (not being natural or common to the race,) their defects will be more likely to be increased in the progeny than their excellencies.[*]

The remark in relation to animals which exhibit peculiarities not common to the race, we will endeavor to illustrate. For instance, in a species of squirrels, the general color of which is grey, we now and then find those which are perfectly white, and others which are black. Similar deviations from the general color of the species are met with also in mice, and other animals. The same thing is found in birds. We have heard of crows which were nearly white, and we have seen (to use a paradox) a white black-bird. Changes of form and habits are likewise met with which are equally striking. Animals which exhibit such deviations from the general characteristics of the race to which they belong, may be deemed *monstrosities*; but if it is wished to perpetuate their singular qualities, it is obviously necessary to adhere as closely as practicable in breeding, to the strain of blood in which these qualities are manifested. If, instead of this, the animals are allowed to breed with those which do not possess the desired peculiarity, the new traits, having no fixed hold on the blood are soon mingled and lost in the general current of the race which runs in a different direction.

Thus, where an extraordinary disposition to secrete fat is exhibited by a particular cow and her progeny, it may become necessary in order to secure that quality and increase the number of animals possessing it, to breed from near affinities. But much will depend on the skill used in selecting the animals to breed together, and only experience and the closest observation, aided by good judgment, can guide to successful results.

We would not, however, advise breeding from near affinities, except so far as may be necessary to fix some valuable quality not belonging to the race in general. Where no superiority is exhibited in a particular family, or where the individuals composing a race are nearly similar, we can see no advantage in resorting to the system.

In regard to the supposed necessity of *crossing breeds*, there are certain vague theories which we would by no means countenance. Some appear to imagine that breeds of animals cannot be continued pure without deterioration. This notion leads those who entertain it, to make various mixtures in breeding, in the hope either of avoiding degeneracy or creating improvement. We believe that the idea is not only unsound, but that, if it were carried out in practice, it would be productive of incalculable injury, by destroying the important distinctions which naturally exist among animals, and by which different species and breeds are admirably adapted to different locations and purposes.

No degeneracy is observable in animals in a state of nature. Among the various wild races (though as has been stated, some *occasional* changes occur,) the principal characteristics are continued from generation to generation. There is no evidence that wild geese or wild ducks degenerate; and no person can reasonably believe that the buffaloes of our western praries need crossing, or that they could be improved for the situation they occupy by any foreign mixture. The same remark will probably apply to the West-Highland cattle of Scotland, and to some of the mountain and other breeds of sheep. SEBRIGHT has well remarked, however, that the circumstances in which wild animals are placed, "produce all the good effects of the most skilful selection;"[*] and though it is not unlikely that they frequently breed from close affinities, their freedom from disease or defect probably prevents the bad consequences which might attend such breeding with animals in an artificial state. The conclusion therefore is, that aboriginal races and breeds are readily continued without crossing. With varieties which have been produced by crosses, it is admitted the case is different. The original fixed habit being broken up by the cross, their course becomes erratic, and their qualities various. Hence the exercise of much skill is required to continue them,. "What has been produced by art," says SEBRIGHT, "must be continued by art."

PERIOD OF GESTATION IN SHEEP.

T. E. PAWLETT, in the London Farmers' Magazine, states he found by observations very carefully made, that the time his ewes went with lamb was as follows:

	Weeks.	*Days.*
The longest time any ewe went with a ram lamb, was,	22	4
The shortest,	21	0
The longest time any one went with an ewe lamb, was	22	2
The shortest time,	20	4

He adds that he thinks this proves the opinion to be correct, that animals go longer with males than females, though the difference is trifling.

Mr. PAWLETT also states that he has found the following receipt of great benefit to lambs when they scour:—

Epsom salts,	6 ounces.
Nitre in powder,	4 "
Boiling water,	3 pints.

Pour the water hot upon the salts and nitre; with new milk (warm) add spirits of turpentine, 4 ounces; bol ammoniac in powder, ½ an ounce; mix and shake them well together. If necessary, repeat the drink every day or two. About 3 or 4 table spoonfuls may be given to a sheep for a dose, and lambs in proportion to their size.

BREEDING COWS.

Mr. J. WEBB, veterinary surgeon, remarks, in an article on the "Management of Breeding Cows," published in the Farmers' Magazine, that—"it is only from the healthy mothers that a healthy offspring can be expected." He further remarks, "from whatever cause it may happen, if a cow is diseased and the blood contaminated, the offspring must less or more, inherit her disease; for it is from the blood and the most vital fluids of the cow, that the calf is supported in the womb."

English flat turneps can be sown as late as the 25th of July, or the 1st of August, and will yield a good crop.

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[*] Sebright observes that—"If one male and one female only of a valuable breed could be obtained, the off-spring should be separated, and placed in situations as dissimilar as possible; for animals kept together are all subjected to the effects of the same climate, of the same food, and of the same mode of treatment, and consequently to the same diseases, particularly to such as are infectious, which must accellerate the effects of breeding in-and-in. By establishing the breed in different places, and by selecting with a view to obtain different properties in these several colonies, we may perhaps be enabled to continue the breed for some time, without the intermixture of other blood."

[*] Speaking of animals in a wild state, Sebright says—"The greatest number of females will of course fall to the share of the most vigorous males; and the strongest individuals of both sexes, by driving away the weakest, will enjoy the best food and most favorable situations for themselves and their offspring. A severe winter, or a scarcity of food, by destroying the weak and the unhealthy, has all the good effects of the most skilful selection. In cold and barren lands no animals can live to the age of maturity, but those who have strong constitutions; the weak and the unhealthy do not live to propagate their infirmities, as is too often the case with our domestic animals."

FARM ACCOUNTS.

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Mr. Editor—I observed in your January number, a form for keeping farm accounts, presented by E. V. W. Dox. Allow me to present one which I have used for the last two years, and which I find very simple and convenient. My system in regard to naming the lots, is similar to that of Mr. Dox, only I prefer letters for this purpose, and use figures to designate the subdivisions, for it is found very convenient to divide each lot into two, three, or four smaller parts, in order that a separate account may be kept of each sort of grain. The complete account of these sub-divisions may afterwards be so arranged as to exhibit the account of the lot which they comprise. On the first page of the book should be an accurate map of the farm, with the title of each division and subdivision, and the number of acres in each. But for the form.

May	*Man's Work.*	*Horse's Work.*	*Weather.*	*Remarks,*
5	¾ d. plow B. 1; 1 d. cart manure D. 3; ¼ d. repair fence.	(1st) ¾ d.plow. ...... (2d) 1 draw 12 l'ds ma.	Pleasant—S.wind.	Commence draw manure; turned cows into pasture A.
6	½ d. plow B. 1; 1 d. cart manure......................	" 1 d. draw 15 loads manure.	Fair—warm.	B. 1 plowed, 3¼ days; apple blossoms appear.
7	1 d. cart manure, ½d. spread manure, ⅞ d. plow D. 3.	(1st) ½ d. plow ...... (2d) 1 d. cart 14 lds.ma.	" "	Commence plow D.3; very dry —man'r carted, 41 lds. on 2 ac.
8	1 d. plow D .3; ½ d. spread manure; 1 d. harrow D. 3. ...	" 1 d. harrow...... (1st) 1 d. plow......	Cloudy and warm.	D. 3 plowed 1⅞ days. " harrowed 1 day.
9	2½ d. plant corn D. 3.	....	Pleasant.........	Commence plant corn.
10	1 d. plant corn; 1 d. harrow B. 1; ¼ d. sow B. 1................	(2d) 1d. harrow.....	Cloudy and cool.	Sowed B. 1—8¼ bush. oats. Corn planted, 5½d; ¼ b. seed—
11	2 d. plant corn.	....	Very warm......	W., ½ acr., s'd steep'd in saltp'r.

This account should occupy two pages of a common quarto or folio book, and for convenience, these pages should be opposite one another, so that they may both be open to the view at once. The weather column and column of remarks will thus fall on the right hand page.

In the column of horses' work you see I designate my teams as 1st and 2nd. The farmer by practice will find that he may use many abbreviations which will facilitate the making of his daily entries. In this form are no names to be written every day as in Mr. Dox's form, but merely an entry is to be made in the column of "Man's Work," of the time and labor. If you have a boy in your employ, you may readily reduce his labor to man's work, and enter it in the same column.

The column of "horses' work" is quite essential. By this you may not only know the kind of labor your horses perform each day in the year, and the number of days they are employed, but having kept an accurate account of their expenses, you may readily calculate what each day's labor has cost you, and consequently know how much each grain account is debtor for their work. Few farmers, I apprehend, have a correct idea of the cost of horses' labor, and yet a farm account must necessarily be quite imperfect without such knowledge.

Next is the weather columns. The weather has so much influence on the growth and product of the farmer's grain, that he cannot help feeling a lively interest in keeping this column, especially as it costs him so little extra labor. He has, moreover, the means of knowing what was the weather at any particular season, or any day of the year, and by a comparison of the weather column with the column of "remarks"—for in this last he should note how the crops thrive—he may learn the exact effect of almost every change of weather on the plants at those particular stages of their growth, and thus he will learn more thoroughly the physiology of plants, and will be enabled perhaps, in some respects, to profit by the knowledge thus obtained.

The last column is for "remarks on the state of the crops, &c., and it may be used to make memoranda of various events connected with farm operations, which would otherwise be forgotton.

Once a year, the farmer should post into another book, or perhaps on the last pages of the book posted, a complete Dr. and Cr. of each crop, a Dr. and Cr. of 'stock account," (including new buildings, &c.,) a "fuel account," "horse account," &c., &c. In short, farmer should ascertain by his books whence comes his profit and whence his loss, and learn, from the same, to increase the former and avoid the latter.

Yours, &c., G. De Witt Elwood.

[illegible]rasselon Springs, *Smithfield, March*, 1846.

WOOL FOR ENGLISH MARKETS.

••••••

The New-York *Journal of Commerce* contains an article on preparing wool for the English markets, in which are valuable directions to those engaged, or who are desirous of engaging in the business. It was written by Hamilton Gay, Esq., who for the past year was largely engaged in the export of wool. His advertisement in relation to the purchase of wool will be found in this number.

He states that wool from this country is very injuriously affected in foreign markets from its unclean condition. On this account, his export of the article last year resulted in a loss of about a penny English per pound, amounting to about $6000. The wool, it is said—"contains too much oil, yolk, and dirt. The sheep are generally washed with too little care, and run too long after washing before shearing. A large portion of the wool from this cause must pass through the hands of those who sort it and scour it in soap and water, before it is sold to the manufacturers. The wool itself is of superior staple, and while upon the sheep is inferior to no other in the world, of equal grade; and it may be safely stated, that every pound of oil, or other worthless substance, will, in the English markets, deduct from the value of the wool containing it, the price, of at least two pounds of wool. English manufacturers and staplers before purchasing, open a portion of the fleeces, and examine carefully, not only the fineness, but also the strength of the staple, and its condition throughout."

Mr. Gay thinks that great pains should be taken in the first place to wash the sheep thoroughly, and that the sheep should be sheared as soon as they become dry. He directs that in tying up the fleeces—"the loose locks, clippings, and tags, and every thing unclean, or of an inferior quality, and the coarse wool from the thighs, if there be any, should be *wholly rejected*, and the fleeces tied up firmly so as to keep their shape, and show, as is customary, the best part of the fleece on the outside."

He also very properly observes that—"sheep should be kept as nearly as possible in uniformly good health and flesh, because every portion of the staple or fibre of the wool which grows while the sheep is very poor from disease or want of food, has so little strength as to break in working; and if this weak growth takes place in the fall of the year, it destroys the fleece for many purposes."

The directions in regard to packing and sacking appear to be important:

"In England each manufacturer devotes his attention to one particular description of goods, for which his machinery has been constructed, and he makes no other. The makers of each kind of goods have established themselves mostly together in some one part of the kingdom, where they have a wool market of their own, in which they seek for the qualities and descriptions suitable for their purpose, and will buy no other. The broad-cloth makers in the west of England—the worsted combers of Yorkshire—the flannel manufacturers of Rochdale—and those who make hosiery in Nottingham—purchase in their several markets a supply suitable only for their own machinery. So nice does this discrimination run, that the fleeces of fine wool taken from sheep one year old, which were never before shorn, are mostly sent to one part of the country and there sold to be used for one purpose, and the fleeces taken from the same sheep the next year, are sent to another part of the country, and there wrought into a very different kind of goods. Thus it is of great importance that *fleece* wool for shipment, before it goes on board, should be sacked and sorted according to the grades of foreign manufacturers, and suitable for their purposes, in order that it may be sold *directly* to them, —otherwise, even if clean and in good order, it must pass first through other hands, that re-sort it, resack it, and distribute it to various parts of the kingdom at considerable expense.

"The size of the bales is the next thing to be kept in view. I have paid on large shipments as high as one dollar *per bale* for 'dock dues,' without reference to the size of the bales; while at some ports the charge is less than one tenth part of this sum.

"Custom in England, gives the purchaser an allowance on *each bale* called 'the draft;' but the amount thus given varies at the different markets I have many accounts of sales in which only one pound weight *per bale* is deducted for 'the draft.' I have other accounts of sales made in different places, in which two pounds, and three pounds, and four pounds, and even eight pounds *per bale* is deducted for 'the draft,' without reference to the size of the bale. This may seem unreasonable, but is established by the ancient usage of the different markets, and must be complied with. The bales should therefore be of a size suited to their destination,; but not too large, else they will not be lifted, but rolled over the docks and streets. Each sack should be firmly packed by a man inside, but never pressed by machinery, and every fleece of weak staple carefully rejected, and those fleeces packed by themselves.

"The shipment then requires some attention. The wool should be placed on board dry, with the sacking whole and clean, and should always be sent as light freight in the upper part of the vessel. Our wool contains too much oil and gummy matter to be placed low in the ship, with heavy weights pressing upon it, without being in some degree injured by matting together."

SUBSOIL PLOWING.

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THE advantages of subsoil plowing are no doubt greater on soils having a close hard-pan subsoil, than on those of a loose and open nature. In the English Agricultural Gazette, we find an account of some experiments, a brief sketch of which may afford interest.

1. A field of 13 acres, "partly heavy on a dry subsoil, and partly dry on a gravelly subsoil," was subsoiled to the depth of 7 to 8 inches—the subsoil plow being preceded by a common plow which worked from 6 to 7 inches deep. The field had been plowed many years, and a hard crust was formed which was in many cases almost impenetrable to water. Two acres only were left plowed in the usual way. The whole field was equally manured and sown with yellow turneps. The appearance of the crop was similar till August, when that portion of it on subsoiled land took the lead, and at harvest gave 26 tons 17 cwt. per acre, while the part plowed in the old way gave only twenty tons 7 cwt. per acre.

2. The second experiment was made on a deep soil inclining to sand, on a subsoil of sandy clay. Two acres were subsoiled 15 inches deep, two were plowed 6 or 7 inches, and two ridges were trench-plowed 13 inches deep. The whole was planted to potatoes, and subjected to the same treatment as to manure and culture. The subsoiled yielded 7 tons and 9 cwt. 2 qrs.; trenched, 7 tons 1 cwt. 2 qrs; plowed, 6 tons 14 cwt. 1 qr.

3. The potato crop was followed by barley. The subsoiled part kept the lead throughout, and at harvest gave 8 qrs. 3 bushels barley, and 36½ cwts. of straw per acre; the plowed part, 7 qrs. 4 bushels 3 pecks barley, and 28 cwts. straw per acre.

PROTECTION AGAINST INSECTS.

……

IF you would save your cucumber-vines and cabbage-plants against the attacks of bugs and worms, go early in the morning, while the worms are sluggish from satiety, and dampness prevents the bugs from flying, and kill them all. Some say "kill them with the thumb and finger;" but we don't see that this mode of inflicting "capital punishment" has any special advantages, and it seems to us that the office of executioner would be a very disagreeable one, especially when the subjects were the big, black "pumpkin bugs," which emit a worse smell than a skunk. A couple of pieces of shingle, one of which may be three inches wide, and and the other an inch and a half, the latter brought to a point at the bottom, are the best "instruments of death" in this case. Crush the insects between the pieces of shingles.

It is easy to see in the morning where a plant has been cut off by a worm the night before, and he will generally be found at that time in his burrow near the stump of the cut plant. He will be buried generally not more than half an inch, and is readily dug out with the narrow pointed shingle. The bugs of all kinds, while the plants are young, will invariably be found in the morning huddled around the stems. If you are "on hand" soon after sun-rise, they will be "dosey," and are easily killed.

Do not rely on the "unparalleled agency of salt in destroying insects," nor of keeping them away by the smell of onion-stalks "stuck round the hill;" but hunt them out, as you would wild beasts. As an auxiliary to this hunting, and to make the plants grow rapidly and get out of the way of insects, the writer has sometimes used hen dung water that has stood till it has be come fetid; turning a half pint. or so, on each hill every day. Guano water would doubtless be similar; but it must not be too strong—four pounds of guano to twelve gallons of water is thought to be sufficient.

AYRSHIRE COWS.

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THOSE who have visited Mr. PRENTICE's farm, near this city, can hardly have failed to notice among the stately Durham cattle there, a small family of Ayrshires. The latter consist of a cow which was imported from Scotland in 1842, and some four or five of her descendants of the first and second generation, all of which bear a striking resemblance to the first named cow. Only one of the young stock has yet bred, but the imported cow has had a calf every year since she has been in this country, and has been in milk nearly the whole time. Though of very small size, she is in shape, a perfect model of a milch cow, and her product at the pail is remarkable—giving this season, on grass feed, upwards of *twenty quarts* of milk per day; the quantity having been ascertained by actual measurement. Considering her diminutive size, which, compared with most other cows, scarcely bears a greater proportion than that of the Shetland pony to a coach horse, we think this very extraordinary.

DRIVING NAILS.—A correspondent informs us that a cut nail may be driven into the hardest dry wood without bending, simply by dipping the point of the nail into oil or grease.

POOR MAN'S COTTAGE.

......

I have looked over your useful paper for many years past, with no small degree of interest, to find a plan for a house at once convenient and comfortable, and cheap in its construction; and although many have been presented, yet none, in the opinion of the writer, combines the above properties in a degree equal to the plan herewith sent. The house is built on a side hill, and exclusive of the basement, is one and a half stories high, and is 33 feet by 28.

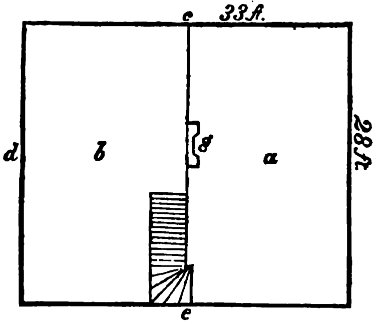
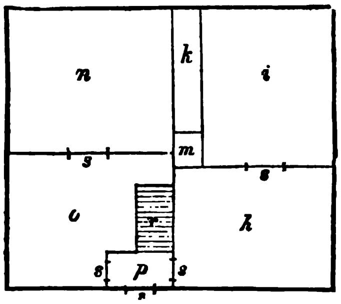


Fig. 59.

Fig. 50, is the basement plan; the cellar *b*, is enclosed with a stone wall commencing at *c*, and running thence along the side *d*, to *e*; *a* is the kitchen, and *g* the fire place; *e*, stairs. There is a wall one foot high around the kitchen, being even with the floor thereof, and the sides of the kitchen are enclosed with studding, weather-boarded on the out side, and lathed and plastered on the inside—being cheaper than stone wall, and dryer.

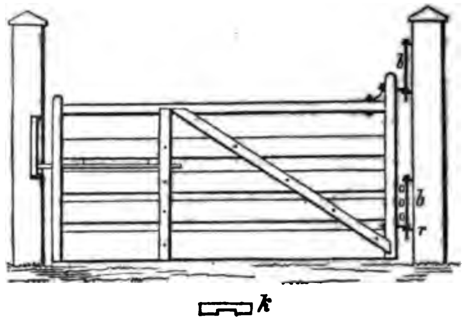


(Fig. 60.)

Fig. 60 represents the second and entrance story,; *h*, is a parlor; *i*, bed-room; *k*, closets; *m*, the chimney; *n*, bed-room; *o*, dining-room; *p*, vestibule; *r*, stairs, leading from vestibule to upper story; *s*, doors. The communication with the basement is by stairs leading from dining-room. The cheapness of the house consists in the small amount of stone work, being only about 25 perch, and there being but one fire-place, viz., in the kitchen, with the flue thereof running up and connecting with the four rooms above, all of which are warmed with stoves attached with pipe to the flue or chimney. I find no inconvenience from there being several pipes running into one flue—it seems to increase the draft. By having but one fire-place there is a great saving in brick, and cost of building chimney and mantle pieces. You can place the windows to suit the builder, and also can enlarge or diminish the whole plan, and also give the exterior an appearance to suit all tastes.

The cost of building in a country town in Western Pennsylvania, finding all materials, is about $500, including painting in and out side. I scarcely need add that the building is of frame or wood. The farmer could put up a similar building, with an outlay beyond his own labor, of not more than $250. H.

Mercer, Pa., 1846.



FARM GATE.—(Fig. 61.)

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HEAD, 3 by 3 inches; heel, 3 by 4; top piece 3 by 3 at one end, and 3 by 4 at the other; upright and slanting braces, one inch thick and 4 wide, one on each side and riveted through. Bottom board 10 inches wide, the other three boards 6 inches wide; the spaces between, 4, 5, 6. and 7 inches; the greatest thickness of the gate, 3 inches. The latch is of hard wood, 2 inches wide, and ⅞ of an inch in thickness, suspended by two chains, and plays between the upright slats and through a mortice in the head. The shutting post has a groove on the inside 20 inches long, to receive the latch. The front side of the groove, which may be termed the catch, is so shaped as to throw back the latch until it meets the groove when it comes back into it. As the gate is intended to open but one way, the post is left the full width on the back side of the groove which keeps the latch from passing by.

But the peculiar and most important feature about the gate, is its being hung on iron bolts, and is therefore capable of being raised in the winter as the snow accumulates, without in the least deranging its operation. All who use gates in snowy sections, know by experience, that not only the shovel, but frequently the old axe comes in requisition, and not unfrequently the trouble is so great that the gate is taken off its hinges, and bars substituted during the winter. Now the above plan saves all this trouble; *b*, *b*, are bolts, ⅞ of an inch in diameter, with a screw at the bottom, on which the gate hangs; *o*, *o*, *o*, are oblong holes through the lower bolt, 6 inches apart, made to receive the key *k*, which together with the ring *r*, supports the gate when it is raised. HIGHLANDER.

New-Lisbon, N. Y.

MALADY OF THE BUTTON-WOOD TREE.

......

MENTION has before been made of a disease which for several years has attacked the tree usually called button-wood, (*Platanus occidentalis*,) in this part of the country, known in the south and west under the name of sycamore. The disease first appeared on the sea-board, in Massachusetts, and other eastern states; and has, we believe, been yearly extending itself westward, though we are unable to say precisely how far it has shown itself in that direction. Many trees have been entirely destroyed in Massachusetts, but we have understood that its ravages have been less severe in that section during the last year or two, than in previous years. We do not think the tree has suffered to so great an extent here, as in some other places. We have noticed that the button-woods were for the two last seasons, rather late in getting into leaf, but thought they finally leaved out better the past spring, than the year before. Lately however, we have observed many trees on which more or less of the leaves have suddenly died, and from present appearances we think it not unlikely that the disease may prove more destructive this year than heretofore. Who can give any light as to the cause? Is it an epidemic, that like the potato disease, is going over the country from east to west?

THE PEACH WORM.

......

From the repeated inquiries made relative to this insect, and the great fear which its ravages occasion, we have reason to believe that a comparatively small portion of fruit cultivators understand its habits, and the mode of its destruction. Indeed, the opinion is still very prevalent, that the truly destructive and contagious malady, the yellows, is caused merely by the work of the peach worm.

The presence of the peach worm, which in nearly all cases, confines its operation to the trunk of the tree, at, or a little below the surface of the earth, may be easily detected by the oozing of the gum from the tree at the surface, or at the place of injury, *mixed with matter resembling saw-dust*. Unlike the apple, quince, and locust borers, it confines itself entirely to the *bark;* and hence may be readily followed in its hiding place with the knife without injury to the trunk of the tree. Inexperienced operators often fail in discovering its presence, as it leaves a thin shell on the outer bark as its covering; but one thing is certain, that early in the season, whenever the gummy sawdust is seen, the worm, (or rather *larva*,) may be always detected, if the hole is carefully followed by the knife to the termination. The annexed figure (fig. 62,) represents the most frequent mode of its operating, in young trees, the dotted lines showing the holes cut in the bark beneath the outer shell. *a*, is the worm, *b*, the gummy matter.

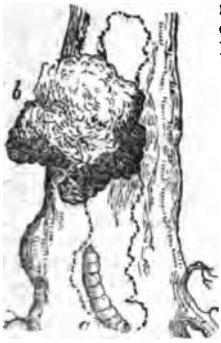


Fig. 62.

From the early part to the middle of summer the worm passes to the pupa state, the appearance of which is shown by figure 63, which represents the follicle enclosing the dormant animal, and composed of pieces of bark cemented by the web; and soon after to the perfect insect, belonging to the miller and butterfly tribe, but more nearly resembling a wasp to a superficial observer. It then deposits its egg in the bark of the tree for another generation. The perfect insect is rarely seen, but it may be obtained by enclosing the pupa, which is easily procured, in a gauze covered frame, until the fly emerges.

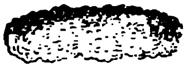
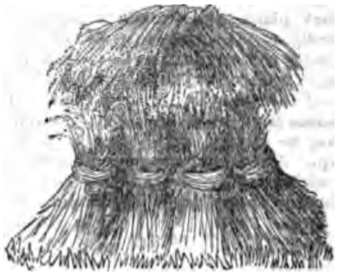


Fig. 63.

The remedy for the peach worm is very simple and effectual, by cutting out with a knife as already described. A single hand will clear hundreds of trees in a day. Passing round among the trees two or three times a year for this purpose is sufficient; early in the season being the proper time. To prevent the fly depositing its eggs, Downing says, that half a peck of air-slacked lime or ashes heaped round the tree early in the season, and left till mid-autumn, has been found successful* The lime or ashes may be spread back over the ground, and serves as a good manure for the trees. It must however be observed that this remedy will be ineffectual for insects or eggs already in the tree. They must first be eradicated. It only acts as a preventive. We have never used this remedy, as from the fewness of the trees attacked, we have found it easier to examine those few with the knife. James Worth, as quoted in Say's Entomology, says—"The best plan of guarding against the ravages of this insect, which I have found, is to examine the trees early in July; take a bricklayer's trowel, and opening the ground around the trunk, the lodgment of the insect will be at once discovered by the appearance of the gum, and it can be readily destroyed; one person will thus examine more than a hundred trees in less than half a day, and very few if any will escape." Say adds, "Mr. Worth examined his fruit trees on the 10th of July, and obtained twenty follicles, and about thirty larvæ; of the folicles, four were empty, the insect having assumed the winged state."



SHOCKS OF WHEAT.—(Fig. 61.)

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The protection of wheat from the rain, while yet remaining in the field, is often a matter of great importance. Wheat cut as early as it should be, to secure it from danger of shelling, and to obtain the heaviest weight of grain,—which has been found by careful experiment to be while one-third or one-quarter of the chaff yet remains green,—is not dry enough to be drawn at once into the barn. In districts liable to sudden and heavy rains, it must be well put up, until tho roughly dried for the stack or mow.

Various modes have been adopted. The simplest is to set up the sheaves in double rows, the heads of the two opposite resting against each other. But this affords no protection from long or heavy rains, and in rainy districts thousands of bushels have been lost in some seasons from the adoption of this imperfect mode. Another way, and which is figured and recommended in Low's Element's of Agriculture, consists of setting up a double row, until twice the length of a sheaf, and then placing two sheaves nearly horizontally upon this row, the heads of the covering sheaves being placed together in the middle. These served to protect the lower or upright sheaves in light rains, but are entirely inefficient in heavy showers and indeed when well soaked through, prevent the whole from drying, and which are often spoiled in consequence. A third, and a very effectual way, is to set up about half a dozen sheaves in a round compact form, to bind another very firmly near the lower end, break down the straw equally on all sides from the centre. and then to place the cap, thus formed, inverted, upon the shock. Much time is however required for this mode. A fourth, equally efficacious and secure, and much more expeditious, is represented by the above figure. It is well known and is practised by many farmers, but a large portion are unacquainted with it. It consists simply of a round shock of half a dozen sheaves, which are covered by two others, broken in the middle and laid on in the form of a cross, spreading out the ends so as to form a perfect shield from storms.

BARN-CELLARS FOR ROOTS.

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Mr. Editor.—When I see a farmer lugging a basket of carrots or roots of any kind, from the house to the barn, a distance perhaps of ten or fifteen rods, I think such an one would know how to appreciate this necessary barn appendage. The plan which I have adopted, is one which for cheapness, the most penurious could not find fault with.

In the first place, in the month of May, when the bay of my barn is empty, I dig a place in the centre of it three and a half feet deep, eight feet wide, and fourteen long. I then take hemlock scantling, four by four, and make a frame eight by fourteen, and place it in the bottom of the cellar which I have dug. Then make another frame of the same dimensions, and place it directly over the other, five feet from the bottom of the cellar. It will then be eighteen inches above the level of the bay; so that it gives more room for door and passage. Then nail on with large nails, hemlock boards perpendicularly upon the outside of the frames. They will need no nailing at the bottom. Leave sufficient door room next the barn floor. Cover with two inch hemlock plank; then make a passage from the cellar to the floor. It requires two doors in order the more effectually to keep out the frost—one at each end of the passage. This has been found sufficient. Fill in the sides of the cellar with earth pounded hard, to prevent the rats from undermining it; the remainder of the earth may be carried to the yard to mix with the manure heap. Almost every barn will admit of a cellar of the size which I have described. The quantity of hay above and on each side being enough to secure it against the frost. A SUBSCRIBER.

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* In some cases, however, the efficiency of this mode may be questioned, as we have seen the worm at work three feet above ground, at the junction of an apricot graft with a plum stock.

Vernon Centre, Feb. 7, 1846.

STALL FEEDING CATTLE.

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A subscriber of Baltimore county, Maryland, asks for information in regard to stall-feeding cattle. This business has been carried on to a greater or less extent in the valley of Connecticut river for many years. In Mr. COLMAN'S Fourth Report on the Agriculture of Massachusetts, the subject is very fully considered; and as our correspondent's inquiry seems particularly directed to the practice of northern farmers, we abstract from the volume referred to, the principal facts embraced in the following article:

Mr. Colman observes that the stall-feeding of cattle is carried on to a large extent in the river towns of the county of Franklin, and to some extent in the hill towns. In the hill towns they are usually fatted on potatoes; the cattle being tied in the barn, and allowed a bushel of well-washed potatoes per day, each, at two or more feedings. They receive no water. A hundred bushels of potatoes, with what hay they will eat, are deemed sufficient to fatten a yoke of oxen, put up in good condition, and the advance in price is deemed a fair equivalent for the value of the potatoes and hay.

Mr. Colman says it is generally thought that cattle fed on potatoes prove as well, that is, have as much tallow, as those fed in any way, and that the beef of such catttle is believed by many to have a peculiar juiciness or sweetness. It is, however, thought they fall away more in driving to market than those fed on hay and corn. Several farmers are in the habit of boiling or steaming the potatoes they give their cattle, and profess to find great advantage in it. It seems however, that experiments have not yet well settled this.

The articles most frequently employed in fatting cattle, are Indian meal, or corn and rye meal mixed, or peas and oats, or oats and corn ground together. In addition to these, many farmers give raw potatoes occasionally. Some farmers of experience are of opinion that potatoes are valuable for fatting cattle in the fall and spring, when the weather is warm, but that they do but little good in cold weather unless they are cooked. The value of potatoes is differently estimated by different individuals; some considering five bushels, others rating four, as equivalent to one bushel of corn. Mr. Colman gives the following examples of fattening with potatoes.

"M. I. approves highly of potatoes as food for fattening stock, and deems four bushels fully equal to one of corn. He gives as many as the cattle will bear, and this varies from one to two bushels per day. He put up a steer in autumn which cost him twenty-six dollars, and killed him in March, weighing one thousand pounds, with eighty-seven pounds of rough tallow. This animal would seldom take more than five pecks per day. The quality of the hay, which cattle consume under these circumstances, he does not deem important; and thinks the straw of grain will do nearly as well as hay.

"He purchased a heifer, two or three years old, at eighteen dollars, and put her in the stall in November. She would have been, (had she lived,) three years old in six weeks from the time she was killed. When dressed, she weighed nine hundred and ninety-four pounds, and had one hundred and seventeen pounds of rough tallow. She was fed exclusively upon potatoes and hay, and eat usually one bushel and a half per day; she was sometimes induced to eat two busnels per day."

The use of succulent vegetables, excepting potatoes, does not seem to be common in fattening cattle in Massachusetts. The opinion was expressed to Mr. Colman by one farmer of large experience, that the common English or flat turnip is of but little value for this purpose. The cattle are said to appear well and in fine condition when fed on turneps, but yielded very little tallow. This opinion is not at all singular, but is frequently expressed; though, as Mr. Colman observes, it is likely that the experiment of fattening with turneps has seldom, if ever been fairly tried in this part of the country.

The course of feeding as practised by one farmer whose example is quoted, is to bring the cattle to the stall about the 20th of November; then to begin feeding them with half a bushel of potatoes and four quarts of meal each per day. After a time he quits feeding with potatoes, and gives only hay and meal, from one peck to nine quarts each per day; and seldom exceeds this quantity.

A mixed provender is generally preferred. Indian meal is commonly chosen for the bases, and meal from peas and oats, or rye, are mixed with it. Oil-cake is highly esteemed, and is often bought even at twenty to twenty-five dollars per ton. It is crushed and then ground fine, in which state it weighs about forty-five pounds to the bushel. A good provender consists of one-half of this oil-meal, a quarter oats and and a quarter corn, ground together, and the whole well mixed when given to the cattle. Mr. Colman states that flax-seed jelly is sometimes used, and with excellent advantage—he used himself, and highly approves it. He quotes the following mode of preparing it:

"To seven parts of water, let one part of linseed be be put for forty-eight hours; then boil it slowly for two hours, gently stirring the whole lest it should burn. Afterwards it ought to be cooled in tubs and mixed with meal, bran, or oat chaff, [hay,] in the proportion of one bushel of hay to the jelly produced by one quart of linseed, well mashed together. This quantity given daily with other food will forward cattle rapidly, but it must be increased when they are intended to be completely fattened."

Mr. Colman remarks that the jelly does not supercede the use of meal, but is best mixed with it; and it is believed no article according to its cost, can be used with greater advantage for this object, and that none is more nutritive.*

To obtain the greatest benefit of the food eaten, the utmost regularity should be observed in feeding. The quantity given at one time, should be as nearly that which the animal can eat with a good appetite, as possible; and the meals should be given regularly at stated intervals. It is believed that cattle kept constantly e stall, and in such a temperature that a moderate iration is constantly going on, thrive faster than e which are allowed to run in yards, and have shel- nder sheds. At all events the cattle should be as comfortable as possible, as quietude conduces to the secretion of fat.

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* Since the above was written, we have met in a foreign paper, an account of a mode of fattening cattle with flax-seed, which was lately communicated to Prof. Johnston, and by him read before the Ag. Chemistry Association. The mode of making and using the article is described as follows:—

"The linseed is crushed and boiled with water for two hours; when hot it is mixed with meal and cut straw, 2 lbs of linseed, 6 lbs. meal, and 9 lbs. straw, for each beast, a day, given at twice, two hours after mixing, with 70 lbs. of the best turneps, divided into two meals. It is quite wonderful to see how fast the cattle feed, [fatten] and how well the holding stock do, the latter having about half the quantity of linseed and meal."

A correspondent of the *Agricultural Gazette*, who uses linseed for fattening cattle, gives the following as the daily allowance to each animal:

A mash composed of 4 lbs. of barley meal, 2 lbs. linseed, dissolved in boiling water, and a small portion of a sheaf of oats chopped. This mash to be divided into two parts, and given twice a day; 7 stones, [56 lbs.] turneps, divided into two parts, and given three times a day; dry straw is always in the rack, of which a beast may eat as much as he pleases.

is usual to feed first in the morning with hay, and ven o'clock give them one-half of the provender eal allowed for the day, after which they are red, either in the stall or are turned into the yard ink at a trough. Then tied again in their stalls fed with what hay or straw they will eat till seven e evening, when the other half of their day's al- nce is given them. If their food is chiefly pota- or other succulent vegetables, they will require no r—indeed if they are each fed with a bushel of tables per day, considerable meal, say four quarts ch animal, may be given in addition, without gene- exciting thirst.

to the kind of stock most proper to be selected ttening, farmers are not fully agreed, some pre- ng to buy oxen from 4 to 6 years old, and others steers 2 to 3 years old. Some of the best farmers to whom Colman refers, prefer raising their own cattle, as on hole most profitable, and to this Mr. C. also agrees. whatever the age of the cattle chosen, all observing ers agree, that small-boned, medium-sized animals, symmetrical form, and with a skin which possesses is technically called the *right feel*, will fatten most tably. Mr. Colman quotes from an English writer cellent description of an ox best suited to the stall, h we think may with advantage be inserted here.

A well shaped ox should have a small head, large eyes, with a placid countenance, as indicating do- , and a consequent disposition to get fat; a fine le and open nostrils; the throat should be clean, ing a protuberance of fat under the root of the e; long in the neck, but wide and deep in the ders; the back should be broad and straight near e setting on of the tail, with the rump-points fat coming well up to it; the barrel should be round, across the loins, and the girth deep behind the ders, with the space between the hip-bone and the rib very small; the fore legs should be short and apart, so as to present a broad appearance to the , and the hind legs should be well shut in the , the seam in the middle of which should be well , and the flanks should be full and heavy. A such as this, is not only the best for affording the est weight, but will also be generally found to lay lesh upon the prime parts, to produce the least ity of offal, with such a quantity of tallow as, em- cally speaking in the butcher's phrase, will cause nimal to die well."

e author of the above remarks observes, that they ot the only marks which indicate a propensity to , and concludes by stating that—"the state of the and flesh is of the first importance, as the essential rty of *handling well*.

to the *profit* of stall-feeding, it is obvious that must depend on various contingencies; as the of the articles consumed as food, the price of beef e market, the skill and economy practised in feed- &c., &c. Mr. Colman gives many examples e an accurate account of all the expense was kept ompared with the amount received for the ani- when sold, showing the profit or loss. In nearly case, the balance exhibits a loss against the cat- It should be observed, however, that the articles med by the cattle are estimated at the current pri- This is deserving some consideration. As Mr. ell remarks, "these articles are high, because far- are not willing to sell; or rather they have not rticles to sell because they require them for the se of fatting their cattle. If the farmers should e, instead of fattening their cattle, to sell their hay orn, the supply would greatly reduce the price; herefore, in the estimation of the cost of fattening , these articles should be charged at the prices would bear if cattle were not fattened. The ac- then would present a different aspect." Another consideration of great importance should be borne in mind, and that is the advantage of consuming the produce of the farm upon the farm, and thus keeping up or increasing its fertility.

In relation to the adoption of some system by which better returns in fattening cattle might be realized, Mr. Colman observes—"It has been supposed that farmers, by going extensively into the cultivation of esculent roots, such as carrots, ruta-bagas, parsneps, or mangel-wurtzel, could fatten cattle to much more advantage, or rather at much less expense than on hay or corn. On this subject we want light, and that which springs from actual and intelligent experience. My belief is, that for the fattening of cattle, when the coarse fodder is well saved, few crops are more profitable to the farmer than a crop of Indian corn at the rate of seventy-five bushels to the acre. Next to corn, potatoes at the rate of four hundred bushels per acre, would be a profitable crop." In the number of bushels which may be produced on an acre, he admits that common turneps, ruta-baga, or mangel-wurtzel, may exceed potatoes; but he thinks "more nutritive matter may be obtained from one hundred bushels of potatoes, than from two hundred of common turneps." He deems the ruta-baga and mangel-wurtzel superior to the common turnep, but still much inferior to the best potatoes. "An experienced farmer," says Mr. Colman, "is of opinion that a hundred bushels of potatoes will fatten an ox. Another says, that he allows twenty-five bushels of corn to fatten an ox, and but little hay will be required. A very good farmer in Charlemont, speaks very strongly in favor of potatoes for fattening cattle. A cow fatted by him on potatoes, showed one hundred pounds of tallow. The experience of many farmers confirms this estimate of their value. Yet one of the best feeders in Deerfield disapproves the use of them. I believe this, however, to be more the effect of prejudice than careful experience."

As to cooking food for cattle, Mr. Colman observes, that but few trials had been made within his knowledge, and these not sufficiently exact to lead to confident conclusions. "One farmer in Coleraine is in favor of cooking his potatoes for stock. The experiments of another farmer in Deerfield, as to cooking vegetables of different kinds, and Indian meal, satisfied him that the advantages, if any, derived from it, were not an equivalent for the increased trouble and expense. Some very exact experiments made in Scotland, in relation to this subject, lead to the same conclusions."

In relation to the gain of fatting cattle, two pounds per day, live weight, is considered good. The largest gain mentioned in Mr. Colman's report, is three pounds per day. To give this gain, the animal is supposed to require one peck of corn-meal, or its equivalent, and from twenty-five to twenty-eight pounds of hay per day. Assuming this as the basis, it would be easy to ascertain by a calculation of the amount of the food consumed and the flesh gained, reckoned at current prices, whether the animal was paying the owner a profit.

PROTECTION AGAINST INSECTS.

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MR. EDITOR.—I have been troubled in cultivating melons, with a small brown grub or maggot, which destroys the root, and the first indication is the withering of the plant. I have succeeded in destroying these in the following manner:—When discovered I apply a strong decoction of tobacco to each plant, pouring it about the roots, and have never known it fail. There is no danger of getting it too strong. R. B. MORRELL.

PAINTING HOUSES.—Paint applied to the exterior of buildings late in autumn or in winter, will endure twice as long as when applied early in summer in hot weather. In the former case it dries slowly, and becomes very hard like a glazed surface, not easily affected afterwards by weather, or worn off by the beating of storms. But in very hot weather, the oil of the paint soaks into the wood at once, as into a sponge, leaving the lead nearly dry and ready to crumble off.

RADICAL EXCRETION OF PLANTS.

Several years since the theory was first put forth by M. de Candolle, of Geneva, that "plants possess the property of excreting by their roots substances which are formed in their texture, and which, if retained in them, would be injurious to their healthy growth and development." It was also contended by the same philosopher, that the excretions left in the soil by plants were injurious to the growth of succeeding crops of the same kind; and on this supposed fact, he based the expediency of a rotation in crops.

M. de Candolle's theory has for sometime been generally regarded as unfounded; but as no particular experiments had demonstrated its truth or falsity, the Highland and Agricultural Society of Scotland offered a premium of twenty sovereigns in 1844, for the best essay on the subject based on practical trials and results. This premium was awarded to Mr. Alfred Gyde, who produced a highly interesting and valuable paper, which we find in the March number of the Transactions of the Highland Society.

The points to which Mr. Gyde directed his inquiries, were as follows:—

Do plants, or do they not, during their healthy growth excrete matter from their roots?

If they excrete, is the matter excreted organic or inorganic? What is its composition?

Does the matter excreted by different classes of plants possess properties peculiar to each class? If so what is the peculiar property of each? Is it identical with the sap of the plant, or does it differ?

What is the physiological action of the roots of plants by which excretion takes place?

Have plants the power of excreting by their roots, substances previously absorbed, and which are noxious to them?

Will germination occur, and the growth of plants proceed, after the seeds have been impregnated with noxious matters?

Will seeds germinate and grow in poisoned soils?

Why do plants refuse to grow on some soils, while they grow freely on others?

In order to grow the plants in such a manner that they could at any time be removed, and the roots separated from the soil without their being mutilated or broken, he adopted the following plan. The plants were grown

1. In garden-soil, placed in pots, and plunged in the earth.
2. In pots filled with silicious sand, the growth of the plants being promoted by waterings with weak liquid manure.
3. In pots filled with silicious sand which had been repeatedly washed in boiling water.
4. In pots filled with damp moss.
5. In pots filled with coarsely powdered charcoal.

The plants grown were wheat, barley, oats, rye, vetches, kidney-beans, beans, peas, cabbages, mustard, and turneps.

To ascertain whether matter is or is not excreted by the roots of plants, Mr. Gyde caused the plants to be removed from the pots in which they had grown, and had them carefully and thoroughly washed in a gentle stream of water,—"after being carefully dried on folds of filtering paper, they were placed in glasses containing distilled water, which had been exposed to the atmosphere for some days. In this situation the roots were carefully excluded from the light, and kept at as uniform a temperature of about 55 degrees as practicable, the green portions of the plant being fully exposed to the action of light and air, the water in the vessels being renewed as it diminished, from absorption by the plant and evaporation from the surface.

From several tables which are given, the particulars of the different experiments are seen. In relation to the results, Mr. Gyde observes:

"From the above experiment it will be seen that the roots of plants impart to water a portion of soluble matter or excretion, and that this excretion appears to be yielded in greater abundance by plants having large and spongy extremities to their roots, as beans, than by those possessed of fine, thread-like extremities, as is the case with wheat or cabbages. It will also be observed that in some instances the water has acquired an odor which is inseparable on the application of heat, and may be distilled over when the water is placed in a retort; the plants which impart odor to water, as the bean and cabbage, are also characterized by emitting a similar odor from their leaves. Plants when in bloom were observed to emit a larger portion of excretion than when young or when ripening their seeds; but the amount of excretion obtained even when many plants were operated upon, was very trifling, seldom more than a grain in weight when dry."

To ascertain whether the soil which had produced the plants contained any excretion, the following experiment was tried.

"Sand, which had been well washed with boiling water was planted with beans and peas; these plants were supplied with distilled water, and placed under the most favorable circumstances for healthy vegetation. After they had grown in the sand three weeks, they were removed, and the sand washed with distilled water, filtered, and on evaporation, yielded a portion of both organic and inorganic matter, in every respect similar to that obtained by the immersion of the roots in water. Plants of the same kinds to those used in the former experiments were cut from their stems, the lower extremities of which were plunged in distilled water, so that the descending sap, which it was presumed would escape, might be examined and compared with the radical excretions from the same kinds of plants, and it was found that in each instance similar results were obtained on evaporation of the water in which the cut plants had been immersed as those from the water in which the roots of similar plants had excreted. Hence we may conclude that the matter obtained from the roots of plants, or radical excretion, is similar to the sap of the plant from which it was excreted."

Mr. Gyde's observations in regard to the physiological action of the roots of plants, and the phenomena attending the circulation of the sap, are worthy particular attention.

"The roots of plants are described as the downward prolongation of the stem, as the trunk and branches are the upward development into the air—the spongioles and extremities of the roots being the newest formed and extending portions, and that by these spongioles, fluids are taken up from the soil and conveyed to the circulation of the plants.

"The fluids thus absorbed are carried by the vessels of the most recently formed wood to the leaves, where, after undergoing certain changes during its exposure to the action of air and light, by which much water is given off by evaporation, the elaborated sap is returned by another set of vessels situated in the inner bark of the tree, to the roots, supplying during its descent, those constituents necessary for the healthy secretions of the plant.

"The sap having arrived in the roots, the new fluid is added to it from the soil, and the ascent again commences by the vessels of the new wood, this action continually taking place during the life of the tree, but progressing more rapidly at one season of the year than at another.

"Many and ingenious are the theories which have been formed to explain the ascent of the sap. Of these, that which was first pointed out by Detrochet appears most probable, and is now generally received by physiologists. Detrochet found that if, into a glass tube, having one end covered with animal membrane tightly secured over it, a strong solution of salt in water or sugar in water be poured, and the end covered with membrane, be immersed in a vessel containing water, that within a few hours the liquid in the tube will be found to have risen several feet. This ascent of the liquid in the tube being caused by a portion of the water from the outside of the tube passing through the membrane and mixing with the solution in the tube; and at the same time a portion of the solution will be found mixed with the water outside the tube—this action continuing until both liquids become of the same specific gravity; the former of these actions, Detrochet terms *endosmose*, and the latter *exosmose*, and he attributes the action to the effect of electricity.

"If we allow the liquid within the tube to represent the sap of the tree—the membrane covering the tube to represent the spongioles of the roots—and the water in which the lower portion of the tube is immersed, the water of the soil, we have a combination of circumstances which approach the state of the growing tree, the sap in the tree always being of greater specific gravity than the water surrounding the roots. Under these circumstances, there is every probability that a similar action to the one just described is continually going on in the plant during the active period of its growth—water would be taken into the plant through the spongioles of the roots by endosmose, and a portion of the sap would escape into the soil by exosmose; the sap consisting of both organic and inorganic matter in solution in water, and would ever be of greater specific gravity than the water in the soil, arising from the exhalation of water continually going on from the leaves, and consequent concentration of the sap prior to its descent."

To demonstrate how far the action above described actually takes place in the living plant, Mr. Gyde made several experiments:—

"Several funnel-shaped glasses were prepared, which would hold about 3 fluid ounces of liquid each, and present 2¼ square inches of membraneous substance, through which endosmose might take place; these glasses were filled with saline solutions, and also solutions of organic matter, and plants cut from their roots immersed in them through the upper opening, where they were secured by collars of Indian rubber, the portion covered with membrane being immersed in water. In each instance the saline solutions were rapidly absorbed by the plants, they were detected in all parts of their structure, and a portion of the solutions was found to have passed by exosmose into the water in which the membrane was placed."

We must pass over the details of many of the experiments which are given by Mr. Gyde. It is proper however to observe in passing, that he ascertained that plants may be made to absorb various metallic salts which are noxious to their growth—such as solutions of zinc, copper, mercury, arsenic, lead, iron, barytes, &c.,—the effect of which was to destroy the plant, sooner or later; showing that plants do not possess the power of excreting noxious substances previously taken into their structure, or at least, that they have not this power in a sufficient degree to preserve their lives when placed in a situation to absorb these substances. He shows that excretions of plants in a healthy or natural condition, are not prejudicial to succeeding crops. He cites an example of an acre of ground having produced an average of 32 bushels of wheat per acre for 12 consecutive years—the ground having only "an occasional light dressing of manure, the stubble generally being burned and the ashes spread on the land."

The inferences to which Mr. Gyde arrives from all his experiments and observations are chiefly the following:

"1. That the commonly cultivated plants of the natural orders Graminæ, Leguminosæ, and Cruciferæ, excrete by their roots soluble matters.

"2. That the excretions consist of both organic and inorganic matters.

"3. That the quantity of excretion thrown off by any single plant is very small, and excretion can only be satisfactorily examined when collected from a number of plants.

"4. That plants absorb metallic salts when in solution in water, and that they quickly die unless the solutions are very largely diluted.

"5. That seeds impregnated with poisonous substances may germinate if the quantity of the poison be very minute, but in most cases the seeds perish.

"6. That plants are not injured by their excretion being reabsorbed into their structure as was supposed by M. de Candolle.

"7. That the necessity for a rotation of crops arises from the soil in most instances being unable to supply those earths and saline constituents required by plants."

WIND POWER—NEW INVENTION.

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Mr. Tucker.—I would wish to bring to the notice of the public, through the medium of the Cultivator, an important improvement in the wind-wheel, a model of which, you may recollect, was exhibited at my hotel last winter, by Dr. Bridgman, of Cabotville, Mass.

It is believed that by the aid of this improvement, wind-power may be used to advantage in many situations where water-power or nothing better can be had.

The great objection generally to a machine being worked by wind, is the unsteadiness of the power, varying from a stand-still to the greatest velocity, at which speed it is liable to injure any machinery attached to it.

A stationary power which can be applied to the various operations of the farm and out-buildings, would be a desideratum with every farmer whose business is on any thing like an enlarged scale.

There are a great many operations on the farm which may be economically performed by a stationary power; that is, by water, by steam, by horses or by wind. The same power that is applied to the threshing of grain, cutting fodder, or the grinding of apples, may, if properly adjusted, and with a trifling additional expense, be applied to the crushing of grain for farm stock, or even for grinding for family use—to the sawing of wood, slitting of boards, to the pumping of water, turning of the grindstone, and various other stationary uses. A friend on Staten Island erected a windmill on the old and common principle, which he applied to fourten different purposes.

The following description of one of these wheels, now in successful operation, I clip from a Chickopee paper. By publishing it, you will not only confer a favor on the ingenious inventor and proprietor, but aid the farmer and mechanic. C. N. Bement.

Albany, June, 1846.

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"On Friday last we visited a new, and we think, highly valuable invention of Mr. A. Judd, of this village, called a "Centrific Wind-Wheel." For simplicity of construction and efficiency of action, it exexceeds anything in the shape of a windmill, that we have ever seen. The principles on which it is constructed are entirely new; and the inventor, in conjunction with Dr. J. B. Bridgman, who as joint proprietor, have obtained letters patent for the invention. The wheel resembles a common overshot or breast water-wheel, except its motion is horizontal; and is propelled by the application of wind upon the inner surface. By this application, the entire circumference of the wheel is kept constantly before the wind, the whole force of which is brought to bear square upon the lever, producing a power three or four times as great as any other wind-wheel in operation. What adds greatly to the value of this wheel is the fact that it is enclosed in a building, and consequently entirely excluded from the weather. This, together with the simplicity of its construction, must extend its durability almost beyond the power of calculation. The building is covered with strips of board, about a foot wide, hung upon pivots, and connected with rods on the inner side like common Venetian window-shutters, and can be opened and shut at pleasure. By this arrangement, any quantity of wind can be admitted and excluded; and the wheel is as easily managed in a gale of wind as in a breeze; and is as completely under the control of the operator, as any water-power. The building is two and a half stories high, the wheel being located in the upper half story. By opening the shutters to the windward, in the second story, and to the leeward in the upper half story, the wheel is set in motion by the passage of the wind up through the centre of the wheel pressing upon the inner surface of the buckets. The wheel which the patentee has erected, is a temporary one, merely to exemplify the principles, fourteen feet in diameter, and seven feet high; and produces from one to five horse power, according to the strength of the wind, and propels a grindstone, a circular saw, and he intends to add a pair of mill-stones for grinding provender. It operates admirably.

What constitutes the great value of this novel and highly ingenious invention, is the cheapness of its construction, and its consequent adaptation to the almost infinite variety of objects for which power is required. It can be constructed of any size, to produce from one *dog power* to a *hundred horse power;* and from its simplicity and consequent ease of management, is brought within the reach of every farmer and mechanic. By its aid, the farmer may thresh his grain, saw his wood, draw water for his stock, cut his feed, grind his provender, churn his butter, grind his axes and scythes, &c., &c. The mechanic, by its aid, can propel his planing machines, his turning lathe, his trip hammer, his circular saw, grind his bark, split his leather, saw his shingles, grind his tools, slit out his stuff, saw out his felloes, &c., &c., &c.

In fact, we can see no reason why it is not destined to become one of the most valuable inventions of this inventive age. And we sincerely hope and trust, that, the ingenious inventor and his enterprising partner, Dr. Bridgman, will receive that ample remuneration which is ever due, though not always awarded to genius and enterprise."

SEASONABLE HINTS TO ORCHARDISTS.

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There are some points, too often neglected, and of very great importance, of which some will need only reminding, to put in practice. Nothing is more essential at this season of the year, for newly transplanted trees, and indeed for all fruit trees for several years after setting out, than *thorough, clean, deep,* and *wide* cultivation. A hill of corn will thrive as well planted in a thick grassy field or meadow, or in the midst of a field of wheat, as a fruit tree. Potatoes, beets, and some other low hoed crops, may occupy the ground where young fruit trees stand, if they are kept well hoed; but if such crops have not been thus planted, spare no time in rendering the soil about the trees deep and mellow, for several feet on each side—a little circle only three or four feet in diameter will not do. Hundreds of experiments have proved, that trees in a field where the *whole soil* is kept as fine and mellow as an ash-heap, will grow from *ten* to *twenty* times as fast as those which are neglected and become choked with grass or weeds. The fruit on large as well as on small trees, will also be very much improved by keeping the ground mellow. An owner of a fruit orchard which had become grown up with grass, said that by the accidental rooting up of the grass by the pigs, his fruit on one tree was so much improved in size and flavor, that he should scarcely have known the kind. An old peach orchard, a few years since, was mostly occupied with a crop of peas; but one row was planted with a hoed crop, the consequence of which was, the latter row was conspicuously marked out by its darker green and more thrifty appearance, at a distance of half a mile.

Another matter, which may be now attended to with propriety and economy, is the budding (inoculation) of apple trees. Many owners of orchards resort only to grafting, and pay perhaps some itinerant grafter a high price for mutilating their trees. Buds may be easily inserted, even by a boy ten years old, if the branches in which they are set are vigorous and thrifty, so that the bark will peel freely; in this case, they will scarcely, in a single instance fail; but heading down and thinning out must not be forgotten the next spring. Where large trees have been grafted last spring, and the grafts have failed, numerous young and fine shoots in most cases spring from the upper extremity of the trunk; these will be in fine order this summer for budding. A bud will scarcely ever live in a slow-growing or stunted branch or stock; but in a thrifty one, on which the bark peels freely for the insertion of the bud, failure will hardly ever take place, even if performed by a novice. Early in 8th month (August) is usually the best time for budding apples.

Those who have pear trees should keep a look-out for *fire-blight,* and the very day that the first branch turns black from its effects, let it be cut off at once two or three feet below the affected parts, and so continue as long as any part of the tree continues to be affected. It is better to cut away three quarters of the tree, than to lose the whole by neglect. There are many failures from a want of promptness and boldness in making the necessary excisions. A fruit cultivator who has a large orchard of pear trees, has suffered four different times within the last twenty years from the attacks of the fire-blight, and as often put a stop to its ravages by a quick and thorough application of this remedy; though some of his fine trees had quite a mutilated appearance before he had done with them. Burning the lopped branches, is considered by many as all-essential, and can do no hurt in any case.

The *black knot* on the plum tree, is also cured in the same way, if the remedy is promptly and incessantly applied; but as it does not extend over the tree so rapidly as is often the case with fire-blight, little more than the part immediately affected need be cut away.

AGRICULTURAL GEOLOGY.

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Mr. Editor.—In the Geology of the fourth district of New-York, the red marl of the Medina sandstone, is said to give color, and in some instances, to constitute a large proportion of soils covering that rock. The country between the Ridge road and Lake Ontario, is spoken of. I wish to know what crops are generally grown there; or to what crop the soil is most adapted. It prevails in many parts of England, and bordering on Wales, where it is considered generally good for wheat, but producing barley in greater perfection. I remember a locality in Shropshire of this nature, and it was particularly subject to the growth of wild poppy. I mention this circumstance because I think the nature of soils, in fact, the geology of a country, may be known from the plants most natural to them.

I will trespass one moment more upon your valuable time. Professor Emmons in his Geology of the second district of New-York, says—" It is the opinion of many of the best informed agriculturists, that lime is essential to fertility. If this view is correct, then no reason can be offered why the unburnt limestone should not be useful, for the state in which it exists in all soils must be that of carbonate. The scrapings of roads, in England, where limestone was the material used in mending them, has invariably been applied to land as manure, generally, I believe, under the impression of the unthinking, that the vertue was that of common soil impregnated with horse dung. The first time I was struck with the use of pulverized limestone as a manure, was when in Gloucestershire, where I enquired of a farmer the effect of the road scrapings; he said it was almost equivalent to lime. The limestone was somewhat argillaceous, and consequently softer than the Trenton limestone. Has the application of road-scrapings from a macadamized road, where the material was Trenton timestone, come under your notice If so, was the effect similar to that of an application of lime? I mean in an increase, in the plumpness of the seed, and not in the growth of straw. C. T. Albot.

Stokes, Oneida Co., 1846.

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Note.—We have called on Prof. Hall, who surveyed the 4th district of this state. He states that the "country between the Ridge road and Lake Ontario" is very good for wheat and Indian corn, which are the principal crops grown there. We have also conversed with Prof. Emmons in relation to the use of limestone in the manner mentioned by our correspondent. We cannot ascertain that the Trenton limestone has been used in any way as manure, unless previously burnt; but it seems reasonable that the effect of road-scrapings from this material would be similar to lime, allowing for the effect of the animal manure which would be mixed with the scrapings.

FRENCH NAMES OF FRUITS.

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The name, merely, of a fruit may seem a matter of comparatively small importance; but one which is pronounced fifty times a year, by ten thousand cultivators, should be as little troublesome as possible. Hence, while the *quality* of the fruit is the main point, a convenient name should not be overlooked.

It has been remarked that the English language is "rich with the spoils" of all other languages; a motley mixture of spellings and sounds, and a labyrinth of rules. This difficulty will not be diminished by the free introduction of the foreign names of fruits. Every man who owns land should cultivate the best varieties, and as a consequence, he must use the names; but to insist that every cultivator should know how to pronounce French, is asking too much. If we pronounce such names as Drap d'Or, Figue de Naples, or Pourprée Hative, as in French, three quarters of our intelligent fruit cultivators will not understand us; and if we give them the English sound, the effect is like horrible jargon on the ears of one who is accustomed to the true sound. Other names do better, as Passe Colmar, Reine Caroline, Florelle, and Belle Lucrative, where the French and obvious English pronunciation are nearly the same; but such cases are rare.

It would therefore seem desirable in all practicable cases to give the English translation; for instance, instead of "Figue de Naples," to say *Fig of Naples*; *Flemish Beauty* instead of "Belle de Flanders;" *Early Purple*, instead of "Pourprée Hative;" *Skinless* for "Sanspeau;" *Early Rousselet* for "Rousselet Hatiff;" and *Double Mountain*, instead of "Double Montagne." Every person of taste will of course avoid the union of French and English in the same name, which would be too much like the mixed phrase we used to hear from the schoolboys, "Je ne *know* pas;" or the "Gryllus *grassus*" of Eaton's Zoological Text Book.

Such names however as Brown Beurré and Summer Bonchretien, can be hardly regarded as objectionable, as these seem to be quite Anglicised, and indeed no other names for these fruits are commonly known. Hence also we would agree with Lindley, Thompson, and Downing, in saying "Summer Franc Real," instead of "Franc Real d'Eté;" and "Spanish Bonchretien," instead of "Bon Chretien d'Espagne."

There are some foreign names, so well known and so exclusively used, that it may be entirely useless to propose any other; as Passe Colmar, Belle Bonne, Bezi de la Motte, and Beurré d'Aremberg.

Downing very properly follows Lindley, and rejects Thompson, in giving the names *Henry the Fourth*, and *White Winter Calville*, of the former,—instead of *Henri Quatre* and *Calville Blanche d'Hiver*, of the latter. Downing has in nearly all cases, however, followed the authority of Thompson, although the latter appears to have laid down no fixed rule in the use of English and French names, but has done it indiscriminately. Hence we find in "The Fruits and Fruit Trees of America," that Thompson is followed in the adoption of the names Summer Bonchretien, instead of Bon Chretien d'Eté; Summer St. Germain, instead of St. Germain d'Eté; Charles of Austria, instead of Charles d'Autriche; Gray Doyenne, instead of Doyenné Gris; and Winter Nelis, instead of Nelis d'Hiver, on the one hand; and Bergamotte Suisse, instead of Swiss Bergamot, as by Lindley; Figue de Naples, instead of Fig of Naples, as by Manning; and Bergamotte d'Holland, instead of Holland Bergamot of Lindley, on the other. Uniformity, at least, should be sought.

While we have an especial dislike to the taste, or rather want of taste, which inclines to the rejection of every thing except the vulgar and unrefined, we have a strong aversion to another disposition, of straining at a modish style. The English is a very respectable language in the main, and it appears to be well adapted to the use of those who speak it; and we should be glad to see it preserved in as pure a state as possible, even in the apparently insignificant matter perhaps, of giving names to varieties of fruit. Some of the suggestions already made may be erroneous, but our principal object is to invite the attention of writers on fruits, to this subject.

DURHAMS vs. NATIVES.

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L. Tucker, Esq.—In perusing the June number of the Cultivator, my attention was drawn to some editorial strictures, on page 178, in relation to the remarks of Mr. Buckminster, and other gentlemen who took part in the discussions at the weekly agricultural meetings at Boston, the past winter, and which have been reported in many of the papers published in that city.

Permit me to premise by remarking that, from the well-known high character and standing of the gentlemen who took part in these discussions, I do not entertain a particle of doubt that their object was to elicit and diffuse what they considered to be useful information among the agricultural community, as to the relative value of the different breeds of cattle for dairy purposes. The Durhams, Herefords, Devons, Ayrshires, and Natives, have each their advocates; yet discussions upon the value of these different breeds of cattle for dairy purposes, can be of little or no use to the public, unless predicated upon well established and reliable facts. Without this, discussion may continue for a century, and at the end of that time, the real merits of the question will remain in the same mystery and uncertainty as at its commencement.

In the discussions above referred to, one of the gentlemen, Mr. Buckminster, is reported to have said—"he was somewhat prejudiced against the Durham breed of cattle. He had taken much pains to know what was their product in milk and butter. He had invited owners of such cattle to show the yield of their dairies, and though he had found instances of very good cows of that breed, he was bound to say, that generally, they were not equal to the native cattle of the country."

From these remarks it would seem, that the owners of Durham cattle have declined comparison, and from this statement it might be inferred that they lacked confidence in their dairy qualities. This should not be so, as the agriculturists are deeply interested in establishing this point; and all who are the friends of this great branch of national industry should be willing to contribute to its prosperity, however it may affect their private interests.

The writer of this is the owner of a herd of Durhams of about forty head, young and old, and is willing, however it may affect his interest, to submit their dairy qualities to a fair test. He has now on his farm eighteen cows and heifers, a part of which are in milk, and the remainder will calve in the course of the summer. He can spare from other purposes, five of them to test their qualities in this respect in comparison with any other breed. He therefore accepts the offer of Mr. Buckminster on the following conditions, viz:

Any individual *now* the owner of a herd of not exceeding twenty cows, in milk and to be in milk during the present summer, may select from that number five cows, and the writer will select from his eighteen a like number to be put on trial in the course of the summer for thirty successive days; the cows to run in pastures, and to have no other feed during the trial than pasture, nor for twenty days previous to being put on trial. The milk drawn from the cows on any one day of the first and last weeks of trial, to be measured in a sealed wine quart measure, and also to be weighed; the quantity of milk so drawn in these two days to be stated in quarts and pounds, as well as the weight of the butter made in the thirty days, and the result, stating that all these requirements have been complied with, to be verified under the oath of the owners of the cows, and that of one or two individuals who assisted in milking the cows and making the butter. The statements so made to be sealed on the first day of September next, and one copy to be directed, by mail, or otherwise, to Wm. Buckminster, Esq., Editor of the Boston Ploughman, and another copy to Luther Tucker, Editor of the Albany Cultivator, and by them to be published in their respective papers.

Though the writer has great confidence in the superior combination of excellencies possessed by the Durhams, his opinion is not less favorable in regard to their dairy qualities in particular; but whatever may be the result of the trial in question, it cannot fail to be of service to agriculturists; and hence his inducement to make this offer.

Lest it may be thought that the writer's cattle have received high keep, he would state that his cows were kept during the past winter, on hay at night, and stabled; during the day they were turned into the cattle yard, and fed upon cut cornstalks and straw, and were *not* fed upon roots. The cows which calved early in the season, were fed a small quantity of shorts or slops for two or three weeks before they were turned into pasture, but since then have received no other food than pasture.

If the proposition herein made is accepted, Mr. Buckminster will have the goodness to inform Mr. Tucker, Editor of the Cultivator, as soon as convenient.

Troy, N. Y., June 8, 1846. V.

BUFFALOES.

MR. EDITOR—Have any attempts been made in Missouri, or other parts of the United States, to domesticate the American buffalo or bison; and with what success? Can any one give information on this subject?

The buffalo in Europe is bred in Hungary for the same purpose as common cattle. The milk which they give is richer than other milk, and considerable in quantity. One animal yielded 1470 quarts in a year. As beasts of labor, they are very strong, but slow and unmanagable. The flesh of the calves is said to be good, but that of the old cattle, though sold as beef, is very indifferent. The number of these animals kept in Hungary, is said to be 70,000.

The native domestic Hungarian cattle, bear a great resemblance to the wild white species which was formerly, [and is yet kept in a few instances,] in England. They are of a dirty white color, are large, vigorous, and active. Their horns are of a prodigious length, exceeding in this respect, even the Long-Horned breed of Lancashire. The oxen are most excellently adapted to labor, uniting to all the qualities of the ordinary ox, a very superior degree of activity. The cow is perhaps deficient in milk; yet by care in the choice of the best, the quantity given by one has been increased to 2,000 quarts in a year. The cows are kept constantly in the house during the whole year, and are brushed and cleaned daily. Their stalls are kept perfectly neat, and are well constructed.

WM. JENNISON.

Cambridge, Mass., April, 1846.

RECENT AMERICAN PATENTS.

Reported for "The Cultivator," by ZENAS C. ROBBINS, *Mechanical Engineer, and Agent for procuring Patents, Washington, D. C.*

For an improvement in the machine for making bricks; John Simpson, Decatur, Georgia. The nature of the improvement is set forth in the following claim: "Having thus fully described my improved brick-making machine, what I claim therein as new, and desire to secure by letters patent, is the compressing dry clay, or clay in its natural state, into the moulds, by the percussion of heavy beaters, combined and operating with the other parts of my machine."

FACTS AND OPINIONS

Condensed from various Exchange Papers.

FRUIT IN MASSACHUSETTS.—The town which raises the greatest *quantity* is Wilbraham, Hampden County, amounting to 51,832 bushels. West-Cambridge, next, raises 50,240 bushels. Then follows in course, Danvers, Newbury, Hopkinton, and Roxbury. As far as *value* is concerned, Brookline stands first, being $37,840; West Cambridge, $25,175; Watertown, $20,000. Nearness to market may affect materially the value of fruit; and fine or very early varieties may sell for ten times as much as ordinary kinds.

COAL TAR FOR FRUIT TREES, having been recommended to exclude rabbits, and the peach worm, two correspondents of the Ohio Cultivator state that they have tried it, and that it either destroyed or greatly injured the trees. One ascribes the injury to the great heat produced by the absorption of the sun's rays by the blackened surface.

LICE ON CATTLE.—M. Linley, in the Genesee Farmer, says that the most effectual remedy, which he has found on repeated trial, is to sprinkle sand copiously over every part of the bodies of his calves; to be repeated once a week. The experiment was suggested by the remark, that bulls, which dust themselves by pawing, are never lousy.

WHEAT WEEVIL.—A correspondent of the Boston Cultivator says, that two quarts of rye to each bushel of wheat, is the best remedy for the weevil, the rye heading out a week before the wheat, the fly deposits its eggs in the rye, and the wheat escapes. [We know many slovenly farmers whose wheat fields are plentifully sprinkled with rye; do they ever suffer from the weevil?]

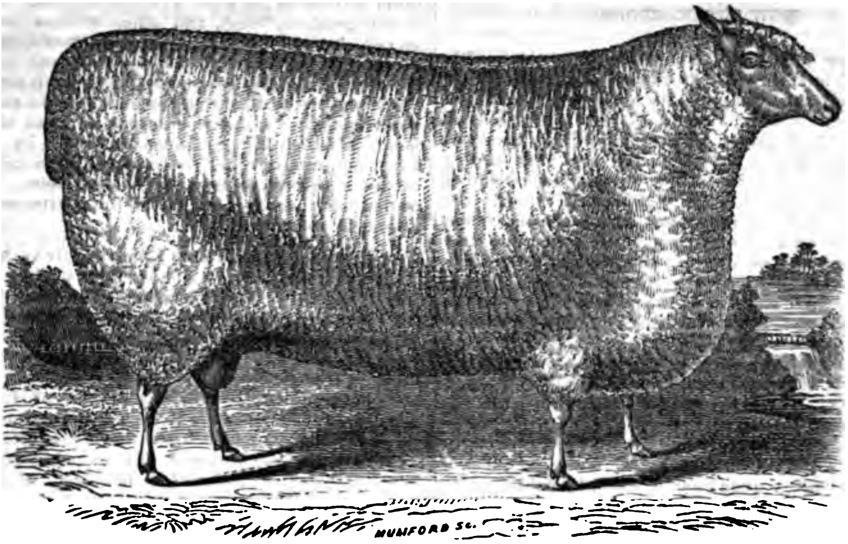
CELLAR FOR ROOTS.—A communication in the Ohio Cultivator contains a description of a good and cheap root cellar, made by digging about three feet deep and of suitable size, the sides walled up to the surface, and a timber roof, covered with earth, to prevent freezing. A door in one end, and a window in the other, admit a free circulation of the air except in the coldest weather, and prevent the heating and stench too often attendant on the storing of the roots in close cellars covered by barns or dwellings.

BUGS ON SQUASHES, are repelled by sprinkling a mixture of soot and sulphur on the young plants while wet with dew in the morning.

PRESERVING SWEET POTATOES.—The difficulty of preserving sweet potatoes for seed through winter, in the northern states, is well known. C. Springer, of Ohio, succeeds perfectly by filling a nail keg with alternate layers of wheat chaff and potatoes, and enclosing the whole in a barrel of wheat bran, headed up. This was kept in a cool part of a room, which was not subjected to freezing. When the barrel was filled with wheat chaff instead of bran, the experiment did not succeed so well.

PARSNIPS FOR HOGS.—While carrots appear to be excellent food for horses and cattle, and very poor food for hogs, parsnips are found to be very fine for hogs. A writer in the Prairie Farmer says, that parsnips are preferred by hogs to all other roots, make excellent pork, and will fatten them in six weeks. A hog 22 months old, weighing when alive 750 lbs., was fattened entirely on raw parsneps and sour milk, "and finer meat was never seen."

VARIETIES RUNNING OUT.—A. W. Dodge, of Hamilton, quotes a "striking prediction" of the late John Lowell, made by him in relation to Knight's theory of varieties running out by age. "The Long Reds," says Lowell, "called the River Platte potatoes, have essentially changed their character, and *ten years hence we shall no longer see that valuable variety.*" Not ten years merely, says A. W. Dodge, but more than twenty have now elapsed, and the Long Reds have never ranked higher for yield or quality.



NEW OXFORDSHIRE BUCK.—(Fig. 64.)

THE above is said to be a very correct portrait of a buck of the New Oxfordshire or Improved Cotswold breed, which was imported from England, and is now owned by CLAYTON REYBOLD, Esq., of Delaware city, Del. Mr. REYBOLD is a son of Maj. PHILIP REYBOLD, who has long been widely known as a breeder of superior long-wooled sheep. Accompanying the above cut, we received the following account of

THE REYBOLD SHEEP-SHEARING.

The undersigned, present by invitation at the shearing of the Reybold flock of Leicester sheep, in Delaware, on the 18th instant, report as follows:—

The flock is in perfect health and fine condition, evincing great care and consummate judgment in the management, and an improvement in fleece and carcass, that after fifteen years of unwearied diligence in the pursuit of this object, may be supposed to approximate to perfection of form and character. Many of the yearling wethers, as well as the ewes, cut eight pounds of well washed wool, with not a broken fleece in the flock, while a two year old buck, of the Reybold breed, cut eleven pounds and a half of washed wool, of superior quality and fineness.

The imported pure Leicester ewes are splendid specimens of that favorite breed, and cannot, perhaps, be excelled in any country; cutting fleeces of very carefully washed wool, seven and eight pounds each, of fine quality and snowy whiteness.

The imported bucks of the "New Oxfordshire breed," it would be difficult to describe in language that would do them justice. To say that nothing equal to them has ever before been exhibited in this country, would be but faint praise. Indeed, they must be *seen* and *felt*, before they can be *understood*. They were shorn by two old and experienced English shepherds, who declare they never sheared or saw their equals in England, *by a long shot*. By the most careful admeasurement before shearing, they were found to exhibit the following enormous proportions.

No. 1. 3 feet across the back;
5 feet from nose to rump;
7 feet 4¼ inches in circumference;
Live weight, 320 lbs.
No. 2. 2 feet 2 inches across the back;
5 feet 2 inches from nose to rump;
7 feet in circumference;
Live weight, 272 lbs.

The fleece of No. 1 weighed 13 lbs. of carefully washed wool, white, and of silky texture; while No. 2 cut a fleece of washed wool weighing 17 lbs., measureing nearly a foot in length of superior quality, and which, if it had been left unwashed, would have exhibited a fleece more than 22 lbs. in weight. After shearing, No. 1 was found to measure 5 feet 6 inches in circumference behind the shoulders; but it would be vain to attempt to convey by description, an idea of the enormous width and depth of carcass, or the way in which the masses of fat are laid on upon the sides, breast, back, and rump of the animal. Suffice to say, in the estimation of judges present, the carcass would cut from six to seven inches thick of fat upon the rib, if the sheep were slaughtered at the present time.

The lambs, a cross with these bucks on the largest of the Reybold breed, exhibits a remarkable consanguinity of form and character to their sires, and will, no doubt, rival them, in the hands of their careful and judicious owner, who will leave nothing undone that can be made subservient to his purpose, namely, the creation of a flock of sheep that shall equal those of any quarter of the globe, for wool and carcass combined. We are happy to find that enquiries and orders for bucks are being made of the enterprising owner of this magnificent flock for distant plantations. May success attend him in his patriotic undertaking.

Mr. Clayton Reybold succeeds his father in the ownership of the Reybold flock. His address is Delaware City, Delaware.

J. W. THOMSON, M. D.,
ISAAC REEVES,
JAMES PEDDER.

Delaware, 20th May, 1846.

HIGH PRICE OF PEARS.—B. V. French states, in reference to pears on quince stocks, that he thought they would not succeed when planted out as standards; but in rich gardens they did well, and some varieties, thus grown, were much improved in size, beauty, and flavor. "One variety in particular, the Duchesse d'Angoulême, succeeded much better when grown on a quince stock. He had seen beautiful specimens of this variety sold at *three dollars a dozen*, some of which were retailed at 50 to 75 cents each."

WATER FOR SHEEP.—The Boston Cultivator states the management of E. Bridge, of Promfret, Vt., who some years ago kept a flock without water in winter, as many farmers practise, and they became poor and lost their lambs; while another flock that had water, and the same keeping otherwise, did well. He thinks water necessary in summer.

NEW PUBLICATIONS.

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Report of the Commissioner of Patents.—We are indebted to Hon. J. H. Johnson, and Hon. B. R. Wood, Members of Congress, for a copy of the Report of the Commissioner of Patents. It is a document of no less than 1376 pages, octavo, exhibiting the operations of the Patent Office during the year ending Dec. 31, 1845. The inventive genius of our people is as conspicuous as ever, judging from this report,—the number of applications for patents during the year being 1246, and the number of caveats during the same time being 452, and the number of patents issued being 502

We are very glad to see that the Commissioner recommends some addition to the present laws "for the more effectual encouragement and protection of inventors and patentees." He thinks the existing laws afford in fact but little protection to the inventor. His remarks on this head are in our opinion, justly entitled to consideration. The fate which too often befals the inventor is thus truly depicted:—

"The fruits of his genius and his toils are constantly liable to be wrested from him by the unscrupulous and dishonest, who, too often countenanced by public opinion, are apt to regard the rights of the inventor as the fruits of a monopoly, which it is a merit instead of a wrong to break down and destroy; and the more valuable the invention, the more liable is the patentee to this species of invasion and injury, as there is more inducement held out to its perpetration. The stealthy thief and the midnight burglar are justly regarded as the pests and enemies of society, and are seized and punished by penalties, severe in proportion to the turpitude of their crimes. Yet their depredations are committed on things which are made by law the subjects of property, and which may be acquired by industry or by purchase. The right of the inventor to his invention, in the judgment of all enlightened minds, cannot but be viewed as far more sacred than mere things of property. It is a mental creation, or rather the discovery of a principle, or thing never before known to the world, and may be, and very many inventions have been, productive of countless blessings to the human family, affecting their destinies as individuals and as communities through all time."

The case of Eli Whitney is cited, "as one among the innumerable instances in which the fruits of splendid genius have been wrested from their possession by the unprincipled depredator upon patent rights."

The claims for premiums under the head of Agriculture, are stated not to have presented much novelty. Some improvements are said to have been made in wheel plows, and one invention for adjusting the set and draught of plows, so as to make them take at pleasure more or less land, are spoken of as being valuable. We presume the invention alluded to is that of Messrs. Ruggles, Nourse & Mason, of Massachusetts, and may be seen affixed to plows lately manufactured by them.

Under the head of *Hydraulics*, seventeen patents have been granted. The "syphon ram" is spoken of. The description undoubtedly refers to Mr. Ellsworth's invention, which has been spoken of in the Cultivator as a syphon pump. "The syphon ram," it is said, "has long been known—that is, a ram in which the descent of water in the long leg of the syphon has been made to operate in raising, or rather delivering water above its level. But, so far as known, has been a philosophical toy, and unavailable for practical purposes. By the intervention of a rarified air-chamber, as it is called, in conjunction with the momentum of the descending water in the long leg, the syphon ram has been made an attainment of much practical value, and possesses the advantage of being more simple, cheaper, and less liable to derangement, than many of the devices employed to raise water above the level of its source."

Under the head of *Chemistry*, forty patents have been granted during the year, several of which appear to have been for valuable inventions. A new plan for a refrigerator is spoken of, which is said to differ from other articles of the kind in two particulars. "Usually, in refrigerators, meat, and other articles to be preserved, become impregnated with mustiness, or unpleasant odors, owing to the moisture from the ice, and the closeness of the apartment. The ice is placed in an apartment by itself, through which passes a coiled tube communicating with the external air, and the apartments in which the provisions are kept. By means of a fan, bellows, or other contrivance, for circulating air, the air is driven through the coiled tube, becoming cooled in its passage, and enters the apartment for provisions in a dry state."

The Phrenological and Physiological Almanac, for 1847; by L. N. Fowler. Published by Fowlers & Wells, 131 Nassau-street, New-York.

This is quite a neat little *annual*, of about fifty pages, comprising, besides the usual matter in an almanac, twenty-five or thirty pages of interesting reading on the subjects of phrenology and physiology, with portraits and phrenological descriptions of various individuals. The Messrs. Fowler are known as the authors of several phrenological works which have been well received by the public. Fowlers & Wells publish the *American Phrenological Journal*, a monthly, of thirty-two pages, at one dollar a year.

DOMESTIC ECONOMY.

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ORIGINAL RECEIPTS.

Indian Pudding.—Boil a quart of milk, and stir in Indian meal till it is nearly as thick as you can stir it with a spoon; then add a tea-spoonful of salt, a cupful of molasses, a tea-spoonful of ginger or ground cinnamon, and cold milk enough to make a thin batter. Boil in a thick bag four hours, or bake the same length of time. Care should be taken that the water does not stop boiling while the pudding is in. Pudding made in this way, with the addition of a quart of chopped sweet apples, and baked from four to six hours, will be found delicious.

Indian Cakes.—Take, at night, one quart of Indian meal, about half scald it with boiling water; then cool it with cold water, so as not to kill the brewer's yeast, one tea-spoonful of which is to be stirred in, with a tea-spoonful of wheat flour, and a tea-spoonful of salt. Sufficient water must be put in to make a thick batter, and left to rise till morning; then add saleratus enough to sweeten the mass. Two or three eggs, beaten and stirred in is an improvement. Then bake on a hot griddle, and you have breakfast cakes fit for Queen Victoria.

Preservation of the Tomato.—Mr. R. B. Morrell gives us the following:—"The tomato, which has come into universal use, and is deemed a luxury by almost every one, may be preserved for winter use in the following manner. When ripe, let them be prepared by stewing as for the table, and seasoned to the liking; put them in small jars (1 quart) with covers. Over the top put a piece of linen or cotton cloth, which will cover and press the cover on; then pour into the cavity melted mutton tallow, and keep them in a cool any dry place in the cellar until required for use. They need only to be warmed to serve them for the table. I use small jars for the reason, that where exposed to the air they soon ferment.

Concentrated Portable Jelly.—Letters patent have been secured for a mode of preparing gelatine in such a manner that a small portion of it added to hot water, and turned into moulds to cool, affords at once a palateable jelly, with no other labor of preparation. The jelly is brought into a concentrated state by evaporation in vacuo, having previously all the condiments necessary for flavoring mixed with it; it is then packed in bottles, and is ready for use; the whole making of the jelly being simply the dissolving a small portion of the concentrated jelly in hot water, and suffering the whole to cool.—*Report of Com. of Patents.*

THE CULTIVATOR.

ALBANY, JULY, 1846.

THE HORTICULTURIST, AND JOURNAL OF RURAL TASTE AND RURAL ART.

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A. J. DOWNING, ESQ., EDITOR.

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THE first number of the above publication was issued by the publisher of "The Cultivator," on the first of this month. That our readers may the better understand the character of "THE HORTICULTURIST," we publish the Table of Contents:

I. Introductory Address. By the Editor.
II. Notes on a few fruits of superior excellence. By the Editor.
III. Rural Architecture—Designs for Improving an Ordinary Country House. By the Editor.
IV. The Two New Ornamental Trees—the Paulownia and Deodar Cedar. By the Editor.
V. The Best Five Winter Pears By Col. M. P. Wilder, Pres't of the Mass. Hort. Society.
VI. The American Arbor Vitæ for Screens and Hedges. By A. Saul, Foreman of the Highland Gardens.
VII. Account of the Origin of the Boston Nectarine. By S. G. Perkins, Esq.
VIII. A Preventive to the Mildew in the Gooseberry. By New-Jersey.
IX. Notes on the Black Fig of the Azores—Culture of the Fig under Glass. By John Fisk Allen, Salem, Mass.
X. How to raise "Giant" Asparagus By T. B., New-York.
XI. Climbing and Pole Roses for Hardy Culture. By Rosa, of Philadelphia.
XII Fruits in Western New-York—the Northern Spy Apple. By W. R. Smith.
XIII. Swainstone's Seedling Strawberry. By the Editor.
XIV. On the Culture of the Laurel. By J. J. Thomas.
XV. On the Use of Guano. By Long-Island.
XVI. The Peach Orchards of Delaware. By Dr. J. W. Thompson.
XVII. The Naturalization of Plants. Translated from the French of M. Neumann.
XVIII and XIX. Foreign and Domestic Notices.
XX. Proceedings of Horticultural Societies.

The general character of this new work, will be seen from the above. It may not, however, be amiss to add, that it will, in its future issues, embrace articles on every subject of interest to the lover of rural pursuits, including Rural Architecture, Fruits and Flowers, Shade and Ornamental Trees, Landscape and Ordinary Gardening, &c., &c., thus supplying a place in our periodical literature hitherto without an occupant. It will be published on the first of each month, printed on fine paper, and in the best manner; each number consisting of 48 pages octavo; stitched in handsome covers. Terms—Three dollars a year, payable in advance, with a discount of 20 per cent. to agents.

"THE HORTICULTURIST" will be issued simultaneously with its publication at Albany,—in

Boston.—By JOSEPH BRECK & Co., 51 North Market street.
New-York.—By M. H. NEWMAN & Co., Booksellers, 199 Broadway.
Philadelphia.—By G. ZIEBER & Co., Booksellers.

The work can be obtained at each of the above places on the same terms as of the proprietor at Albany.

Subscribers can also obtain it, free of postage, of the following Agents:

Boston.—Dr. E. Wight, 7 Custom-House-st.
A. D. Phelps, 124 Washington-st.
Newburyport.—J. G. Tilton, Bookseller, 28 State-street.
Providence.—A. A. Stillwell, bookseller.
Comstock & Page, Depot of the R. I. Hort. Society.
Worcester, Mass.—Ruggles, Nourse & Mason.
Springfield, Mass.—H. & J. Brewer, Druggists.
Hartford, Conn.—Mr. John Olmsted, Merchant.
New-Haven, Conn.—Geo. N. Seagrave, Seedsman.
F. Trowbridge, Ag. Warehouse.
F. H. Pease, Bookseller.
Syracuse.—Stoddard & Babcock, Booksellers.
L. W. Hall, Bookseller.
Auburn.—J. C. Derby & Co., Booksellers.
Geneva.—G. H. Derby & Co., Booksellers.
Rochester.—D. M. Dewey, Bookseller.
Buffalo.—T. S Hawks, Periodical Depot.
Troy.—Levi Willard, Periodical Depot.
Hamilton.—S. C. Griggs, Bookseller.
Rutland, Vt.—David Kirkaldie.
Cleveland, O.—Fellows & Dewey, Booksellers.
Cobourg, C. W.—Franklin House, Bookseller.

All the Agents for the Cultivator are respectfully invited to act as Agents for "THE HORTICULTURIST." Specimen numbers will be sent to all who may wish them, together with prospectuses and showbills

BOSTON AGENCY FOR "THE HORTICULTURIST" AND "THE CULTIVATOR."

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Mr. BRECK, editor of the *New-England Farmer,* announces in that paper of June 24th, the discontinuance of that work, which has now completed its 24th year. This paper, from its commencement under FESSENDEN, has pursued the "even tenor of its way," with less change and greater steadiness of purpose, than has attended almost any other periodical in the country.

Punctual in its weekly visits, cheerful in its tone, sound and discriminating in its advice, it was always the wise counsellor of the farmer; and we part with its "old familiar face" with sincere regret—regret that we shall receive its visits no more, and regret that, in the rage for new things, it should have been so far forgotten as to afford Mr. Breck, by whom it has been conducted with great judgment, so poor a reward, as to induce him, as a matter of interest, to discontinue its publication.

It will be seen by the following notice of Mr. BRECK, that he has made arrangements with us, to act as publishing agent for our publications at Boston:

"We have entered into an engagement with Luther Tucker, Esq., Proprietor and Editor of the Albany Cultivator, to act as agents for his proposed new work, "The Horticulturist," to be edited by A. J. Downing, Esq., and issued monthly; also as agents for "The Cultivator," a work too well known to need commendation.

"The Horticulturist will be published simultaneously at Boston and Albany. Subscribers will be supplied with that Journal at $3 per annum, or with the Cultivator at $1. As the two periodicals will be distinct in their character, we hope to have the pleasure of enrolling the names of all the patrons of the old New-England Farmer, on the subscription list of each journal.

"To those who have paid in advance, (not a very large class,) we will credit the amount paid to either of the above named works, or refund the money, as may be most acceptable. Those who have paid to Jan. 1st, 1847, will be entitled to one volume of the Cultivator from Jan. 1st, 1846."

TO CORRESPONDENTS.

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COMMUNICATIONS have been received since our last from C. B., C. N. Bement, John W. Lincoln, D. Eastman, N. Longworth, Nelson Wilson, R. Van Wagener, S. B. Buckley, H. F. B, Adrian Bergen, D. T., Zenas C. Robbins, and J. N. Blakesley.

J. H., Liberty, Miss.—We shall be glad to receive the details and results of the experiments you speak of.

We are indebted to Hon. J. H. JOHNSON, Hon. B. R. WOOD, Hon. T. SMITH, and DANIEL GOLD, Esq., for copies of the Annual Report of the Com. of Patents.

To LEWIS F. ALLEN, Esq. Black Rock, for copies of his American Herd Book.

To—— ——, for Premium List of Washington Co. Ag. Society.

☞ WE tender our thanks to Prof. JAS. F. W. JOHNSTON, of Edingburgh, for a series of pamphlets, embracing the results of Investigations into the Nature and Cause of the Potato Disease in Scotland; and also for Parts I, II, and III, of the Proceedings of the Agricultural Chemistry Association of Scotland; the reception of all which, we are happy to acknowledge at the hands of Mr. JOHN P. NORTON.

MONTHLY NOTICES.

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Fine Strawberries.—During a late visit to Mr. Wilson's garden, in this city, our attention was attracted by the very fine appearance of several beds of strawberries. We learned on inquiry, that most of them were foreign varieties, lately introduced here. and known under the names of *Myatt's Eliza*, *British Queen*, (a seedling of the former,) *Swainstone's Seedling*, *Deptford Pine*, *Elton Pine*, *Princess Royal*, and *Victoria*. Those persons who have for a few years past been familiar with the horticultural periodicals of England, will recollect the high praise which has been given to these kinds in that country. Several of them are certainly splendid—the size very large, the shape perfect, and the flavor excellent. We picked one of the *British Queen* variety which measured fully *four* inches in circumference, and was of uncommon length. But for hardiness, productiveness, beauty of shape and quality, combined, the preference should perhaps be given to the *Swainstone Seedling* and the *Victoria*.

Besides the above, we saw some very superior American varieties—particularly *Ross's Phœnix*, and the *Iowa*. The former of these, appears to be fully equal, considered in all respects, to any kind we have ever seen. Its size is large, flavor good, and its productiveness unsurpassed. The *Iowa*—a native from the western prairies—has lately been cultivated to considerable extent in the vicinity of Cincinnati, and is, we think, recommended by Mr. Longworth, of that city. It is unquestionably a very hardy and prolific variety. Mr. Wilson will probably be able to spare plants of all these kinds the present season.

☞We acknowledge the reception of some very fine strawberries of the *Virginia-Scarlet*, and *Hovey's Seedling* varieties from the garden of Prof. Hall; also, a specimen of the *Black or Musk Hautbois*, from the garden of Messrs. E. &. E. Dorr, of this city.

The Wheat-Crop.—In some districts of Western New-York, and in some parts of New-Jersey, Pennsylvania, and Maryland, we hear that the Hessian fly has done much damage to the wheat. To what extent this injury is likely to affect the aggregate product of the country, we cannot yet determine. Accounts in general from the western states, speak of the appearance of the crop as favorable, excepting its rankness of growth in some cases, from which rust is feared.

Dutchess County Horticultural Society.—We have received from Radcliff Van Wagener, Esq., the list of premiums offered by this society for the exhibition holden at Poughkeepsie on the 18th and 19th of last month. We received no account of the exhibition in time for this number. The list embraced premiums for cherries, apples, strawberries, raspberries, currants, gooseberries; flowers of various kinds, vegetables, &c. D. B. Fuller, Esq., is President; S. B. Trowbridge, Treasurer; and J. H. Jackson, Secretary. None but members can compete for premiums, but membership is not confined to the county. The terms of membership are one dollar per year, and the exhibition are to be held semi-annually.

Sale of Merinos.—James L. Randall, Esq., of Clay, Onondaga Co., in this state passed through this city not long since, with about forty head of pure Merino sheep, which he purchased in Vermont. The bucks, twenty-four in number, were all obtained of John T. Rich, Esq., of Shoreham, and the ewes were selected from the flocks of Messrs. M. W. C. Wright, L. C. Remelee, and —— Cook, of the same town. All these flocks are widely known and highly esteemed. Mr. Randall's purchase includes many very superior sheep, and we unhesitatingly pronounce the lot an uncommonly good one.

Importation of Saxon Sheep.—We are pleased to learn that Mr. S. C. Scoville, of Salisbury, Ct., has lately imported a lot of very superior Saxon sheep, consisting of four bucks and four ewes. We have not seen them, but are informed that they are of larger size than any Saxons before brought to this country. The weight of their fleeces is said to be proportionate to their size, while the wool lacks nothing in fineness, but is fully equal in this respect to any of the noted race to which they belong. Their shape and appearance is said to indicate good constitution. We presume they will be the means of decidedly improving the sheep-stock of this country, and we hope Mr. Scoville will be remunerated for the heavy cost he has incurred in their introduction.

Potato Disease.—The idea is entertained to some extent, that the potato disease is caused by a "deficiency of alkalies in the soil," and that the application of these would be a preventive. B. F. Wilbur, in the *Massachusetts Plowman*, states that he planted last year, a piece of newly cleared ground with potatoes. Piles of logs had been burned off leaving much ashes in the places of them. He says—"Wherever these piles were burned off, the potatoes rotted most."

The Seventeen Years Locust, (*Cicada septemdecim.*)—This curious insect has made its appearance this season in several districts west of the Alleganies. We have seen no notice of its having been seen on the east side of the mountains, but have heard of its presence in Western Pennsylvania, Western Virginia, and South-eastern Ohio. They seem to excite some alarm in some instances—the inhabitants fearing that they will eat up vegetation. This fear is groundless; they eat nothing while in the winged state, and only do damage by perforating the twigs of young trees for the purpose of depositing their eggs. It is a singular fact, that though these insects appear at the same place in the winged state only at exact intervals of seventeen years, yet they do not appear in all districts at the same time, or in the same season. Thus their appearance in this section and in parts of New-Jersey occurred in 1843, and in other sections last season. How can this variation in their appearance be accounted for?

Fine Lambs.—Mr. E. Chersbro, of Guilderland, brought some lambs to this market on the 15th of June, which were dropped the first week in April, that weighed ten pounds per quarter. They were three-fourths South Down, and of as fine a quality as to flesh as we have ever seen; we speak from actual trial. Mr. C. reared thirty lambs from twenty-five ewes A few years ago he reared twenty-three lambs from eleven ewes.

White Crows.—In an article on the "Principles of Breeding," in another part of this number, it is mentioned that white crows have been sometimes seen. Since that article was written, we have learned, through the *Zanesville (O.) Gazette*, that Dr. W. E. Ide, of that place, has lately received for his ornithological cabinet, one of these rare birds, which was shot in that vicinity. It is said to have belonged to a brood of four, two of which were black, and two entirely white, except a dark tinge towards the tips of the wings. They were nearly or quite full grown. Their parents were black.

Ribbon Houses—Correction.—The article on Ribbon Houses in our May number, stated that the boards for the walls should be "a fourth of an inch thick." It should have been *one* and a fourth of an inch thick.

National fair.—This exhibition, which took place at the city of Washington, was continued for three days during the first week of the past month. We have as yet met with no regular or official report, but have reason to believe, from the notices we have seen, that the contributions were numerous, embracing samples of almost every variety of fabric, implement, or article manufactured in this country; and of a quality highly creditable to the skill of our artizans. The different specimens of cloth are described as being very superio in quality and finish, equalling in these respects any of the same class of goods of foreign manufacture. Numerous specimens of silk goods were shown, which appear to have attracted much attention. The fabrics from the establishments of Mr. Gill, at Mount Pleasant, Ohio, and Wheeling, Virginia, were greatly admired. We have no doubt the effects of the exhibition will be decidedly beneficial to the country at large, and we trust it may be followed, annually, by others of even greater extent and interest.

American Herd-Book.—Just as our number for this month was going to press, we received several copies of this work. We have not space to notice it particularly this month, but would simply say that it is handsomely got up, embraces 240 pages octavo, and will be sold at three dollars per copy. It is for sale at this office, and by A. B. Allen, 205 Broadway, New-York. We are also informed that it will be for sale at Nashville, Tennessee, and at Louisville and Lexington, Kentucky. We shall speak of the work more fully next month.

☞ Those who are desirous of procuring *large geese*, are referred to the advertisement of Mr. Geo. Bement, in this number.

☞ The attention of wool-growers is invited to the advertisement of Messrs. Perkins & Brown, who, it will be seen, have established a wool depot at Springfield, Mass., to aid farmers in obtaining the best possible prices for their wool.

Stoddard's Seedling Strawberry.—We inadvertently omitted to acknowledge in our last, the reception of a large box of these fine strawberry plants, from Col. J. S Stoddard, of Palmyra. They are now growing finely, and promise well. Those wishing to add this celebrated strawberry to their collections, can obtain them in August, by addressing Col. S., at Palmyra.

AGRICULTURAL SOCIETIES.

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New-York State.—Our efforts to obtain the proceedings of the meeting of the Executive Committee at Auburn, in May, have not been successful. There was, we believe, no meeting of the Committee last month. We have the following notice from the President, by which it will be seen that a full meeting of the Ex. Committee on the 2d Thursday of this month, is particularly desired:

To Gentlemen composing the Executive
Committee of the New-York State Ag. Society.

At our coming meeting, on the 2d Thursday in July, much important business will be brought before you, and I hope that every member of the Committee will make it convenient to attend at that time, for it is very desirable that there should be as full an attendance as possible. J. M. Sherwood, Pres't.

Auburn, 16th June, 1846.

Jefferson Co., N. Y.—Fair to be held at Watertown, Sept. 22, 23. Among the list of premiums, we notice 12 vols. of the Cultivator are offered.

CUTTING GRAIN.

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There are several advantages in favor of cutting grain before it becomes dead ripe. 1. It has been ascertained that wheat cut while it is so soft that it may be mashed between the fingers, will make flour containing more gluten, will absorb more water in kneading, and make more and better bread than the same quantity of grain perfectly ripened while standing. 2. The straw of all grain is much better if cut while it is a little green, and this on many farms is an item of no small importance, as it constitutes a large proportion of the winter food of stock. 3. Cutting early is often the means of saving a crop from rust. At all events, it has been well proved that whenever grain is struck by rust, it is best to cut it. If it stands it does not improve after the rust comes on, but often grows worse rapidly. If it is cut and well cured in shock, it sometimes makes a very fair kernel. Farmers are too often careless about the manner in which their grain is shocked or "stooked." It should be bound in small bundles, and the shocks carefully put up so that they will stand the weather. Wet spoils both the grain and straw. Good, bright, early-cut straw, especially that of barley and oats, is better than hay made according to the practice of some farmers.

FOREIGN.

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By the Caledonia, arrived at Boston on the 18th, we have English and Scotch papers to June 4th. The prospect for crops, both in the British islands and on the Continent, was uncommonly fine—giving every appearance of an abundant and early harvest. The potato crop, which was in a forward condition, had not as yet shown any symptom of disease, and hopes were entertained that it might escape the scourge to which it has been subject in former years. The new corn-bill had passed a second reading in the House of Lords by a majority of 47. Not a shadow of doubt now exists as to its final passage. Immense quantities of grain are said to remain in bond, waiting to be released under the low rate of duty, (4 shillings per quarter,) which the new bill allows; and on its becoming a law, prices will undoubtedly be very low. Whether the United States will realize any important benefits from this new feature in British policy, remains to be shown. The cotton market is firm.

INQUIRIES.

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Time to Bud Roses.—R. B. M., (Greene, N. Y.) The practice of Mr. Wilson, a good Horticulturist, of this city, is to begin budding in July, and continue as long as the bark will work.

Management of Sheep.—A Young Farmer, (North Easton, N. Y.) It is not well to turn sheep suddenly from very poor feed to that which is very abundant and succulent, especially about the time of yeaning. The rank feed may produce *hoven*, or it may bring on *scours*, or it may cause a plethora and inflammation, particularly of the udder, which soon renders the milk unwholesome, and makes the lamb sick. The supply of food should be constant and regular, moderately nutritious, and in seasonable quantity.

Curing Corn-Fodder.—It is best to cradle it, or cut with a hook or sickle, lay it straight, and after it is wilted a little, put it in small shocks, and bind them close to the top. Let them stand till they are dry, and the fodder will be good.

Machine for Cutting and Threshing Grain at the same time.—J. D., (Davenport, Iowa.) The only machine of this kind of which we have any knowledge, was invented and patented by Jeremiah Darling, of Adrian, Lenawee county, Michigan. He left with us, sometime since, a drawing of this machine; otherwise we are ignorant of its character. We presume he can tell you all about it.

J. M., (Fall River, Mass.) The "barn and rails" you speak of as being in La Salle county, Illinois, could probably be insured against fire at some office in that section. As to the land, it had better remain in grass probably, till you get ready to move on it. It is likely the best grasses for it will be found to be timothy, red-top, and Kentucky blue-grass. We cannot tell what the cost of seeding would be in that section.

Name of Plant.—E. W. H., (Towanda, Pa.) We cannot tell what plant you mean by "*live-forever*." If you will give the botanical name or send a specimen of the plant, we will try to answer your inquiry.

Emigrant's Hand-Book.—"Exordium." (Cornish, N. H.) This work is for sale by W. C. Little, of this city. Price fifty cents.

Lice on Hogs.—Rub their bodies with oil or grease, or, if they are not too heavy, dip them in a decoction of tobacco.

Culture of Indian Corn.—J. P., (Charleston, S. C.) See article on this subject in our April number, p. 114.

Machines for Grinding Corn and Cob.—S. T., (Dayton, Ohio.) Pitts' Corn and Cob Cutter, (see Cultivator for last year, p. 324,) is the best we know;

the price is $40, They are made at Rochester, in this state, and Winthrop, Maine. Address J. A. Pitts, Rochester, or H. A. Pitts, Winthrop.

Straw-Cutters for Horse-Power.—S. T. Hovey's Nos. 5 and 6, prices $25 and $30, are capital machines. We cannot tell what the cost of transporting to Dayton, O., either this machine or Pitt's Corn and Cob Cutter would be; but they are light and not bulky, and the cost could not be large.

Ellsworth's Self-acting Pump.—S. T. You say, at ten rods from the well you allude to, there is a fall of five feet. We do not see anything to hinder the pump from working in such a situation. We cannot tell about the cost. Will Mr. Ellsworth be so good as to drop us a line on the subject?

Lice on Fowls.—"Inquirer." Oil their heads frequently, and give them wood-ashes to roll or dust themselves in.

CONDENSED CORRESPONDENCE.

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POTATO ROT.

We have received several communications on this subject, the substance of which we give as follows:—

H. S. Sheldon, Middlebury, Vt., is inclined to attribute the disease to atmospheric influence. He states that the only case of entire exemption within his knowledge, is where the potatoes were grown on an elevation, about a mile in length and 150 feet high, of a sandy soil, with a south-western aspect. The soil is said never to have been manured, but its fertility is kept up and rather improved by the application of plaster. It is sown in the spring, and a heavy growth of clover is produced, which, being turned under, furnishes nutriment for the succeeding crop. He says—"potatoes grown on this soil are unusually dry and mealy, and keep perfectly sound through the winter. We have raised the pink eyes for the last ten years, and those whom we furnish, pronounce them superior to any in market."

Jonathan Storrs, Mass., thinks the cause of the disease is owing to the unusual prevalence of cold weather for the two last seasons, after the potatoes were planted, which by chilling tho seed, caused the produce to be defective. He advised to defer planting till after the middle or 20th of May. Last year he says he planted from the 20th to the 24th of May, and the crop was sound. He advises, also, that the ground be plowed a few days before planting, to let the sun and air warm the soil, that the potatoes may vegetate the sooner.

[Note.—Nearly all the accounts we receive, are in favor of *early* planting.]

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WHEAT CROP IN OHIO.

Extract from a letter dated Zanesville, O., June 16th: "We have the best wheat crop we have had for five years. Some farmers will commence cutting to-morrow. Wheat is now fifty cents per bushel; after harvest, 40 cts. will probably be the price. * * * The locusts have killed nearly all the young fruit trees of three years and under. Mr. —— has not one left in a fine young orchard."

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VINTAGE OF OHIO.

N. Longworth, Esq., of Cincinnati writes, under date of July 17th:—"We have never had a better promise of a grape crop than at the present time. If we meet with no accident, I shall make from 500 to 600 barrels of wine.

Sowing Machine.—Our correspondent, Mr. S. B. Buckley, of West-Dresden, Yates Co., N. Y., writes in reference to an inquiry which appeared in the Cultivator, that he has a machine which he uses to sow plaster and lime, and which he thinks very useful. He says—"a man and a horse can sow from 20 to 25 acres in a day with great ease. It can also be used for sowing grain, and is doubtless the machine alluded to by Mr. Ruder, p 68, of your present volume. It is made by [illegible] at Dresden, in this county."

PRICES OF AGRICULTURAL PRODUCTS.

New-York, June 20, 1846.

COTTON—New Orleans and Alabama per lb., 6¾a10c.—Florida, 6¾a8¾—Upland, 7¾a9 cts.

BUTTER—Prime, per lb, 15a17c.—Common, 6½a7.

CHEESE—Per lb., 6a7c.

FLOUR—Richmond City Mills, per bbl, $6a$6.25—Balt., Howard st., $4—Ohio and Michigan, via canal, $4.

GRAIN—Wheat, Genesee, per bushel, $1a$1.02—Rye, northern, 63a64 c.—Corn, Northern and Jersey, 55a60 c.—Southern, 50a51—Oats, Northern, 32a33c.

HEMP—Russia, clean. per ton, $215a$225—American water-rotted, $130a$180.

HAMS—Smoked, per lb., 5½a6 cts.

BEEF—Mess, per bbl., $6.25a$7—Prime, $4.25a$4.50.

LARD—5½a7c. per lb.

PORK—Mess, per bbl., $10.50—prime, $8.00a$8.12½.

WOOL—(Boston prices.) June 17:

Prime or Saxon fleeces, washed per lb.	38a40	cts.
American full blood fleeces,	35a37	"
" three-fourths blood fleeces,	30a32	"
" half blood do	28a30	"
" one-fourth blood and common,	26a28	"

AGRICULTURAL MACHINERY.

THE following Agricultural Machines are particularly recommended to extensive Planters for great capacity, strength, durability. and performance. From our experience in their manufacture, and success attending sales of them the last ten years, we can safely recommend them to be equal, if not superior to other similar Machines made in this country, viz:

Lever Horse Powers, for 2 horses, with strength sufficient for draught for eight,	$150
Lever Horse Powers, for 2 to 6 horses,	100
Endless Chain Horse Powers, No 1,	75
Do. do. do. do No. 2,	100
Driving Leather Bands,	8 to 10
Threshing Machine, with 20 inch cylinder,	40
Do. do. do. 30 do.	60
Goldsborough Corn Sheller and Husking Machine, very simple and excellent,	40
Pettigrew N. Carolina Corn Sheller,	80
Corn and Cob Crushers,	30
Corn Mills, for grinding fine or coarse meal,	40
Wheat Fans, (Rice's Patent,)	25 to 30
Do. do. Watkin's extra,	45
Cylindrical Straw Cutters, for cutting straw, hay, corn-stalks, &c., (the medium size,) price,	30 to 40
Cylindrical ever cutting,	14 to 20
Hand Corn Shellers,	12 to 14

Also, plows of most approved construction, harrows, cultivators, grain cradles, and every variety of Farming and Garden Tools. Field and Garden Seeds, an extensive assortment.

☞ See Catalogue for particulars.

R. SINCLAIR, Jr., & Co., Baltimore.

June 1. 1846.—2t.

VALUABLE FARM AND COUNTRY SEAT FOR SALE.

THE subscriber offers for sale the Farm on which he now resides, situate in Southwick, Hampden county, Mass. The road from Hartford to Northampton, via Westfield, along which a mail coach passes daily, runs nearly through the centre of the Farm, which contains about 400 acres, nearly half of which is wood land, heavily timbered. It is bounded on one side by the Farmington canal, which renders the communication with New-Haven, an excellent wood market, easy and expeditious. The buildings are a mansion house, with a wing, the latter new, making a front of 70 feet. Also a house for a tenant; three large barns, nearly new, covered with pine and painted; a corn house, carriage house, sheds, &c. Great pains have been taken in selecting and cultivating choice fruit, and there is now on the Farm, in full bearing, a great abundance of the best varieties of apples, cherries, peaches, &c. A part of the land is of superior quality, and on almost every lot is living water.

Tariffville, a large manufacturing village, seven miles distant, affords a ready market for wood and every kind of produce, raised on a farm. This is one of the most valuable and desirable locations in the country, not only for farming purposes, but for the gentleman of leisure. A large portion of the purchase money, if desired, can remain for a term of years. I will sell the whole together, or in two parts. Letters of inquiry addressed to me, will receive prompt attention, or inquiry can be made of LUTHER TUCKER, Albany, or of R. SHURTLEFF, Springfield.

ROGER S. MOORE.

Southwick, March 1, 1846.—6t

BURRALL'S CORN SHELLER.

THE subscribers are now fully supplied with this valuable Sheller so as to be in readiness hereafter to fill orders for any number, without delay. A further trial during the last month has fully established the superiority of this over all other Shellers for hand power. For description, engraving, &c., see Cultivator for February, page 60. Retail price $10, with a liberal discount at wholesale.

E. COMSTOCK & Co.
Albany Ag. Warehouse

March 1— 1846

DURHAM STOCK FOR SALE.

THE subscriber has on his farm near this city, more stock than he needs, and will sell two two years old, and two yearling heifers, one yearling bull, and four spring calves. The price of the latter will be from $50 to $75 when about 3 months old, and the price of the yearlings and two years old, from $100 to $125.

This young stock was got by the prize bulls Duke of Wellington, and prize bull Meteor; both possessing the blood of the stock of the celebrated breeder, Thomas Bates, Esq., Yorkshire, England. The stock is out of first rate milking Durham cows, and will carry its own recommendation. GEO. VAIL.

Troy, June 1st, 1846—2t.

VALUABLE FARM ON STATEN ISLAND FOR SALE.

THE well known farm of the late Samuel Akerly, M. D., situated on the South side of Staten Island, in the town of Southfield. Richmond county, in consequence of the decease of its late owner, is now for sale. It contains 125 acres, 25 of which are woodland; is in a high state of cultivation, and well stocked with a variety of fruit trees. The house has been recently enlarged—is ample and commodious; the barns are new, and the farm is in good fence. It has a wide front to the water on a bay which abounds with the best kind of salt water fish, also with clams and oysters, all easily procured fresh from their native element. The experience of a long course of years, for the main part of the dwelling house has stood for more than a century, has demonstrated that the situation is perfectly healthful.

The late owner, Dr. Akerly, died in July last; he had cultivated the farm for a number of years with great assiduity and care, keeping a daily and most minute register of the precise amount of labor and cultivation bestowed on each field, and noting many important observations which would be highly instructive and useful to the future owner. The purchaser may be furnished with a copy of this diary.

The site of this farm is extremely beautiful—the approach to it from the main road is a private road of about half a mile in length, running mostly through a piece of woodland, consisting of young timber of vigorous growth. After the visitor has travelled on this road about one-third of a mile, there opens upon him a prospect which takes in the low land, comprising the cultivated part of the farm—the placid and bright bay which separates Staten Island from Monmouth county, N. J.,—the highlands of Neversink, with the two lighthouses erected thereon—the lighthouses on and near Sandy Hook, together with the one at Prince's Bay, including the west end of Long Island. All the vessels employed in the commerce of New-York with foreign countries may be seen as they come in and depart, from the dwelling house and several other points on the farm.

The late owner, Dr. Akerly, who was born and educated in this city, after extensive examination and inquiry for a farm to which he might retire, on account of impaired health, selected this spot, to which he removed in the year 1839. Here he sought health and quiet retirement, and found them, until the day before his decease. He became exceedingly attached to the farm as a residence, and would have most reluctantly exchanged it for any other residence whatever. Such were its attractions that he never left it a single day, in winter or summer, but with regret.

Eor further particulars apply to HIRAM KETCHUM, Executor, No. 31 Wall st., or SAMUEL BOWNE, No 83 John-street

July 1. 1846.—3t.

GENUINE MORGAN HORSES.

THE subscriber will offer for sale his stud of the choicest Morgan stock on advantageous terms, to those who may wish to grow profitable, enduring, high-priced horses, consisting of the following horses, viz: *Flint Morgan* and *Sherman Morgan, Jr.* Both were sired by old Sherman Morgan, the most distinguished horse of his times, and are not second as stock horses to any of this far famed race. Flint Morgan, I bought of Jonas Flint, Esq., of St. Johnsbury, Caledonia county, Vt., and Sherman Morgan, Jr., I bought of John Buckminster, Esq., of Danville, Vt., there raised and known as the Blanchard colt, to which places persons are referred for their pedigrees and merits, as well as to testimonials in my possession; also to the counties of Strafford, Canol, Belknap, N. H., where their stock is highly approved and extensively known. Also, four breeding mares of this inestimable blood, viz: Dolly, Kate, Fanny, and Adaline, and all of which were sired by old Sherman Morgan, and are believed in foal. Their blood, power, and appearance, together with their stock already produced, favorably recommend them as breeders. Also, colts and fillies of various ages, may be seen at the stable of the subscriber; all of which will be sold collectively or separately to suit applicants.

JOHN BELLOWS.

Lancaster, Coos Co., N. H., May 1, 1846—3t.

100 DOZEN CAST STEEL HOES.

THE subscribers have on hand an elegant assortment of Cast Steel Hoes, highly polished, and finished in the best manner. Among them 60 dozen made by Henry Tower, of Milbury, Mass., of four or five different numbers and prices. Also several other kinds of neck and eye hoes. Merchants and others dealing in hoes are invited to examine them. E. COMSTOCK & Co.

Albany Ag. Warehouse, March 1, 1816.

GUANO,

BY the ton or hundred, or in smaller quantities, at 23 Dean-st.
E. COMSTOCK & Co., Albany Ag. Warehouse.

PATENT PREMIUM FAN-MILLS.

I. T. GRANT & Co., still continue to manufacture the celebrated Improved Patent Fan-Mills, at the old stand, Junction, Rens. Co., N. Y. These mills have taken the *first premium* at the following places:—New-York State Fair, at the Institute, New-York, the State Fair, at Pennsylvania, and the State Fair at Maryland. The subscribers have no hesitation in saying that these mills surpass anything of the kind ever offered in market. They are the only mill that has ever been produced that will chaff and screen wheat perfectly clean in one operation.

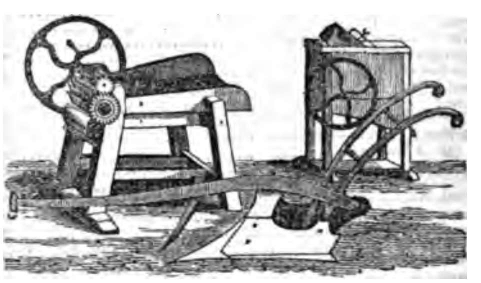
We also manufacture *Grain Cradles* of the very best quality, which have taken the first premium at the New-York State Fair. They are for sale at factory prices, at the following places:—

A. B. Allen's, 187 Water-st., New-York;
D. L. Clawson's, 191 " "
E. Comstock & Co.'s, Albany;
H. Warren's, Troy; and
Viall & Warren's, Mechanicsville, Saratoga Co., N. Y.

All orders thankfully received and punctually attended to. All goods delivered at Troy, N. Y., free of charge.

I. T. GRANT, &Co., Junction P. O., Rens. Co., N. Y.

Feb. 1—tf [2]



PROUTY & MEARS, BOSTON,

CELEBRATED, highly approved, and unequalled CENTER DRAFT PREMIUM PLOWS—for sale at their *sole agents'*,

JOHN MAYHER & Co.'s

Agricultural Warehouse, 195 Front-st., near Fulton, New-York.

The subscribers have just received a large assortment of Prouty & Mear's celebrated and highly improved CENTER DRAFT PLOWS, which are in every way *superior to all others now in use*; and having been appointed sole agents for the sale of the same in the city of New-York, we invite the public to call and examine for themselves, as the above plows cannot be obtained at any other establishment in the city. Dealers and others in the country supplied on the most reasonable terms.

We also wish to inform merchants and farmers that we have constantly for sale plows of our own manufacture, and all others now in use.

The following is a list of prices of some of the plows manufactured by us.

A No. 1,	Worcester	patent,		$1 50
A " 2,	"	"		2 00
A " 3,	"	"		2 50
2 B	"	"		3 50
2 B	"	"	with colter,	4 00
Eagle, No.1,	"	"		4 50
" "	"	"	with colter,	5 00
" " 2,	"	"		5 00
" " 2,	"	"	with colter,	5 50
Meadow C	"	"		5 50
"	"	"	with colter,	6 50

Castings to fit the Worcester Ploughs, 3½ cents per pound.

We likewise have for sale the most extensive assortment of *Agricultural Implements* ever offered in this city, most of which are new and highly improved patterns, warranted to be made of the best materials, and of very superior finish, among which are the following:

Pitts' Corn and Cob Crusher,
Hussey's " "
Sinclair's " "
Hussey's Reaping Machine,
Bark Mills, 4 sizes,
Coffee " "
Corn Shellers of all kinds,
Horse Powers " "
Threshing Machines "
Subsoil Plows, of the most approved kinds,
Cultivators of the most approved kinds,
Sinclair's Stalk and Straw Cutter,
Hovey's " " "
Stevens' " " "
Greene's " " "
I. T. Grant & Co.'s Prem. Fan Mills,
Clinton's Prem. Fan-Mills
Rice's " "
Holmes' " "
Store Trucks, Wheelbarrows,
Mule Waggons, &c., &c.,

Langdon's much approved Cultivator Plows or Horse Hoe. All kinds of plow castings constantly on hand. All the above articles are offered for sale on the most reasonable terms. Castings of all kinds made to order.

JOHN MAYHER & Co.,
195 Front-st., N. Y.

N. B. *Beware of Imposition.* Any person offering plows for sale, and representing them to be of our manufacturing without the full name "J. MAYHER & Co.," on the mouldboard and beam of the plows, are guilty of a *false representation*, as no person in the city and county of New-York has the genuine article for sale but ourselves. April 1—tf [2] J. M. & Co.

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TO WOOL-GROWERS.

PERKINS & BROWN, of Akron, Summit County, Ohio, have made arrangements for opening a COMMISSION WOOL HOUSE at Springfield, Massachusetts.

Their intention is to class the fleeces into the different grades for cloths and for combing; and so to offer it to the different manufacturers and purchasers for exportation. as to enable dealers in wool, and the growers of fine wool in particular, to realize the advantage which the quality and condition of their wool deserve.

From their experience in the business, and extensive acquaintance with the Eastern Manufacturers, and wool dealers, they flatter themselves that they will be able to do their business to the satisfaction of those who may entrust them with their wool.

Their compensation for storing. (not over six months) and selling, will be one cent on the pound, and for classing one cent in addition.

Wool will be classed or not, as the owner may direct, but if no directions are given, they will class the fleeces as they do their own.

Their arrangements are such that persons may receive their pay for wool when sold, either at Akron or at Springfield, as they choose, by giving us notice of their preference.

In order to secure the best prices. wool should be put up in good condition, and be free from burrs and dirt. and secured with hemp or flax twine, and packed in good flax or hemp sacks.

Each sack should be directed to *Perkins & Brown, Springfield, Massachusetts*, with the initials of the owner, or some private mark to distinguish one person's wool from another. The direction and marks should be very plain to avoid mistake or loss.

Perkins and Brown should be immediately written to at Springfield, Mass., giving the number and weight of the sacks, with the distinguishing mark, and the name and residence of person shipping it. A receipt should be taken by the owner, of the person receiving the wool for shipment, stating the number and weight of the sacks of wool sent, and whether Saxony, Merino, common, or combing wool. Perkins & Brown will pay for the transportation of the wool when it is received.

Persons wishing to attend to the sale of their wool themselves, greatly need some convenient, central place of deposit, where it may lie without heavy expense for storage, while they look about for the best market, and where they can obtain correct and disinterested information in respect to the market. Our past experience in marketing the wool we have grown, has led us to this plan, and our location will be one of the most central and convenient for that purpose in New-England.

SIMON PERKINS,
JOHN BROWN.

Akron, Summit Co., Ohio, July 1, 1846—1t.

P. S. Our own wool we sold at an average of sixty-eight cents per lb. last season. PERKINS & BROWN

SEED WHEAT.

PURE Seed Wheat of the "Soules" variety, which yields from 40 to 50 bushels per acre, may be had at $1 00 per bushel after the 1st of August. Orders may be addressed to

BISSELL & HOOKER,
July 1—1t. No. 1 Arcade, Rochester, N. Y

WOOL.

LIBERAL advances will be made by the subscriber upon wool consigned for sale, or shipment to England.

HAMILTON GAY,
July 1—3t. 53 South-street, New-York.

AFRICAN GEESE AND WHITE TURKEYS.

A FEW pairs of African Geese and White Turkeys for sale. All letters addressed to the subscriber, (post-paid. will be promptly attended to. GEO. BEMENT.

Albany, July 1, 1846—1t.

"HAND THRESHING MACHINE."

AS the season is near at hand when this valuable machine will be wanted by farmers who raise small quantities of grain, the subscriber would call attention to his advertisement concerning it in the last January number of the Cultivator.

July 1—1t. J. PLANT, No. 5 Burling Slip, N. York City.

WIRE CLOTH SEIVE AND SCREEN MANUFACTORY.

THE subscriber has constantly on hand a large assortment of the above articles, which he offers at the lowest market prices. D. L. CLAWSON.

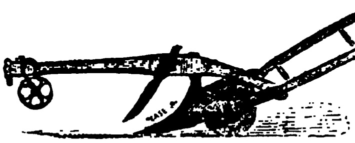
July, 1846—10 mos. 191 Water-st . New-York.

P. S.—All kinds of wire work manufactured to order.

TURNEP SEED of every variety for sale in any quantity by E. Comstock & Co., 23 Dean-st., where all other choice seeds and implements are kept constantly on hand.

AGRICULTURAL WAREHOUSE AND SEED STORE.

138 CHAPEL-ST., NEW-HAVEN



F. TROWBRIDGE,

Dealer in Agricultural Implements and Machines, Grass, Field, Grain, Garden. Herb, and Flower Seeds, Trees, Plants, &c.

ALBANY AGRICULTURAL WAREHOUSE.

No. 10 *Maiden Lane, and* 23 *Dean-street.*

THE above establishment has been greatly enlarged and improved by connecting with the former spacious rooms the store No. 10 Maiden Lane, thus giving us a front on two streets—the stores being connected in the rear. The assortment of improved agricultural machines and implements will be proportionably increased, making one of the most extensive assortments of select and improved agricultural and horticultural tools and machines in this country.

Our location is within six rods of all the railroads leaving the city, and but a few rods from the steamboat landings, thus affording travellers an opportunity to look through our rooms, although they may have but a short time to remain in the city. The proprietors flatter themselves that in all that properly belongs to a well regulated Seed Store and Agricultural and Horticultural Repository, this establishment will fully meet the expectations of the public.

A constant supply of all kinds of tools at wholesale, to which the attention of Merchants is solicited. Farmers and all others who feel any interest in agricultural or horticultural improvement, are respectfully invited to visit us. E. COMSTOCK & Co.

July 1, 1846.

SUPERIOR HORSE RAKES, made from the best white oak timber, for sale at the Albany Agricultural Warehouse.

July 1. E. COMSTOCK & Co.

DURHAM BULL FOR SALE.

THE subscriber (not having sufficient use for him,) offers for sale his imported, thorough bred Durham Bull, "Prince Albert,"

He is five years old—a roan, of medium size —quiet in temper, and easily managed. For a portrait and description of this bull, see the August number of the Cultivator, and for his pedigree see the British Herd Book, vol. IV., page 382. His sire was the celebrated bull, "Sir Thomas Fairfax."

If not previously sold, he will be offered for sale at the next show of the New-York State Agricultural Society.

Letters on the subject may be addressed to the subscriber at Red Hook, Dutchess county, N. Y., where the bull can be seen.

Jan. 1, 1846.—tf ROBERT DONALDSON.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. III. ALBANY, AUGUST, 1846 No. 8.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

OFFICE IN NEW-YORK CITY, AT

M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,

where single numbers, or complete sets of the back volumes, can always be obtained.

☞ "The Cultivator" is subject to newspaper postage only. ☜

MR HORSFORD'S LETTERS.—NO. XII.

……

Giessen, April 16, 1846.

MR. TUCKER—A few days since, I received the numbers of the Cultivator from August forward. In glancing through them my eye met with numerous remarks and inquiries, that, I am persuaded would not have found a place in your valuable journal, had the accompanying letter of Baron von Liebig been previously circulated among your subscribers.

In connection with the letter sent to you last year, it seems to me to present in the happiest manner, the great and yet simple truths of rational manuring. I beg for it an insertion in the Cultivator.

Respectfully yours, E. N. HORSFORD.

……

ON THE PRINCIPLES OF ARTIFICIAL MANURING.

BY BARON VON LIEBIG.

If we compare the experience of farmers regarding the fertility of the soil and the quantity of its productions, we are surprised by a result which surpasses all others in general application and uniformity.

It has been observed, that in every part of the globe where agriculture is carried on, in all varieties of soil, and with the most different plants and modes of cultivation, the produce of a field on which the same or different plants have been cultivated during a certain number of years, decreases more or less in quantity, and that it again obtains its fertility by a supply of excrements of man and animals, which generally are called manure; that the produce of the fields can be increased by the same matters, and that the quantity of the crop is in direct proportion to the quantity of the manure.

In former times scarcely any attempt was made to account for the cause of this curious property of the excrements of man and animals. Without taking into consideration the origin of the excrements, and the relation they bear to the food, it was not astonishing that their effect was ascribed to a remnant of vital power which should qualify them to increase the vitality in plants. Ascribing their influence on the fertility of the fields to an incomprehensible occult cause, it was forgotten that every force has its material substratum; that with a lever, in a mathematical sense, which possesses no extension and gravity, no effect can be produced, no burden raised.

Guided by experience, which is the fundamental basis of all inductive science, and which teaches us that for every effect there is a cause, that every quality, as, for instance, the fertility of a field, the nourishing quality of a vegetable, or the effect of a manure, is intimately connected with and occasioned by something which can be ascertained by weight and measure; modern science has succeeded in enlightening us on the cause of the fertility of the fields, and on the effects which are exercised on them by manure.

Chemistry has shown that these properties are produced by the composition of the fields; that their fitness for producing wheat or some other kind of plants bears a direct proportion to certain elements contained in the soil, which are absorbed by the plants. It has likewise shown that two fields, of unequal fertility contain unequal quantities of these elements; or that a fertile soil contains them in a different form or state from another, which is less fertile. If the elements are contained in the soils in sufficient quantities, it produces a rich crop; if it is defective in one of them only, this is shown very soon, by the impossibility of growing in it certain kinds of plants.

Moreover it has been proved with certainty what relations these elements of the soil bear to the development of the plants. Chemical analysis has demonstrated that a certain class of these elements is contained in the seeds; others in different proportions, in the leaves, roots, tubers, stalks. They are mineral substances, and as such, are indestructible by fire, and consequently remain as ashes after the incineration of the plants or of their parts. Many of these elements are soluble in pure water, others only in water containing carbonic acid, as rain water; all were absorbed from the soil by the roots of the plants in a dissolved condition. It has been shown that, if in a field, those elements which remain after the incineration of the grain or seeds, are present in an insufficient quantity, no wheat, no barley, no peas,—in a word none of those plants can be cultivated on that field which are grown on account of their seeds. The plants which grow on such a field produce stalks and leaves; they blossom but do not bear fruits. The same has been observed regarding the development of leaves, roots, and tubers, and the mineral elements which they leave behind after their incineration. If, in a soil in which turneps or potatoes are to be cultivated, the elements of the ashes of these roots are wanting, the plants bring forth leaves, stalks, blossoms, and seeds, but the roots and tubercles are imperfect. Every one of the elements which the soil gives up to the plants is in a direct quantative proportion to the production of the separate elements of the plants. Two fields, which, under otherwise equal circumstances, are unequally rich in mineral elements of the grain, produce unequal crops. One containing them in larger quantity produces more than another containing them in less. In the same manner, the capacity of a soil to produce tuberculous plants, or such which have many leaves, depends upon its amount of the elements of the soil which are found in the ashes of those plants.

It results from this with certainty, that the mineral substances which are furnished by the soil, and which are found again in the ashes of plants, are their true food; that they are the conditions of vegetable life.

It is evident, that from a field in which different plants are cultivated, we remove with the crop a certain quantity of these elements; in the seeds those mineral parts which the soil had to provide for *their* development, and in the roots, tubercles, stalks, and leaves, those elements which are necessary for *their* production. However rich the field may be in these elements, there can be no doubt that, by several cultures, it becomes more and more impoverished; that for every plant a time must arrive when the soil will cease to furnish, in sufficient quantity, those elements which are necessary for a perfect growth. Even if such a field, during many subsequent years, produced twenty-five or thirty fold the amount of the seed; for instance, of wheat, experience shows that the crop gradually decreases, until at last the amount will be so small that it approaches the plant in its wild state, and would not repay the cost of cultivation.

According to the unequal quantity in which the mineral elements of grain, tubercles, roots, seeds, leaves are contained in a soil, or according to the proportions in which they may have removed in the crop, the land may have ceased to be fertile for roots and tubercles, but it may yet produce good crops of wheat. Another may not produce wheat, but potatoes and turneps may thrive well in it. The mineral substances contained in a fertile soil, and serving as food to the plants, are taken up by them with the water, in which they are soluble. In a fertile field they are contained in a state which allows of their being absorbed by the plant and taken up by the roots. There are fields which are rich in these elements, without being fertile in an equal proportion; in the latter case they are united with other elements into chemical compounds, which counteract the dissolving power of water. By the contemporaneous action of water and air,—of the oxygen and carbonic acid of the atmosphere,—these compounds are decomposed, and those of their constituent elements, which are soluble in water, but which had been insoluble by the chemical affinity of the other mineral substances, re-obtain the property of being absorbed by the roots of the plants.

The duration of the fertility of a field depends on the amount of the mineral aliments of plants contained in it, and its productive power for a given time is in a direct proportion to that part of its composition which possesses the capacity of being taken up by the plant. A number of the most important agricultural operations, especially the mechanical, exercise an influence on the fertility of the fields only thus far, that they remove the impediments which are opposed to the assimilation of the mineral food into the vegetable organism. By plowing e. g., the surface of the fields is renewed and made accessible to air and moisture. The nutritious elements contained in the soil in a latent state, acquire by these operations, the properties necessary for their transmission into the plants. It is easy to conceive the useful influence which, in this respect, is exercised on the produce of the fields by the care and industry of the farmer. But all these labours and efforts do not increase the amount of mineral elements in the field; in rendering soluble in a given time, a larger quantity of the insoluble substances, and obtaining by these means a richer crop—the time is merely hastened, in which the soil becomes exhausted.

The experience of centuries has shown that, with the help of manure, of the excrements of animals and man, with which we supply those fields which have ceased to produce crops of grain, &c., serving as food for man and animals, in a sufficient quantity, the original fertility can again be restored; an exhausted field which scarcely yielded back the seed, is made to produce a twenty and more fold crop, according to the proportion of the manure provided.

Regarding the mode of action of the manure, it has been observed, that all excrements do not exercise an equal influence on plants. The excrements of sheep and cattle, for instance, increase in most fields the crop of roots and herbaceous plants to a far greater degree than those of man and birds, (guano.) The latter act far more favorably on the production of the cerelia, especially if they are added to the animal excrements, and are given to the fields at the same time.

A field, for example, which has lost its fertility for potatoes and turneps, but on which peas and beans still thrive, becomes far more fertile, by a supply of the excrements of horses and cows, for a new crop of potatoes and turneps, than by manuring it with the excrements of man or with guano.

The most accurate experiments and analyses have pointed out that the excrements of man and animals contain those substances, to the presence of which the fertility of the soil is due. The fertilizing power of manure can be determined by weight, as its effect is in a direct ratio to its amount in the mineral elements of the food of plants. The truth of the result of these chemical analyses must be evident to every one who inquiries into the origin of excrements.

All the excrements of man and animals are derived from the plants of our fields; in the oats and hay, which serve as food to the horses, in the roots which are consumed by a cow, there are a certain quantity of mineral ingredients. A horse, in consuming 15 lbs. of hay and 4½ lbs. of oats per day, consumes 21 ounces of those substances which the hay and the oats took from the fields; he consumes annually 480 lbs. of these constituent elements of the soil, but only a very small portion of them remains in his body. If a horse during one year, increases 100 lbs. in weight, this increase contains only 7 lbs. of those mineral substances which were contained in the food. But what has become of the 473 lbs. which we cannot detect in his body?

The analysis of the fluid and solid excrements which the horse gives out daily, shows that the ingredients of the soil which do not remain in the body of the animal are contained in its excrements; it shows that in an adult animal, which from day to day does neither increase nor decrease in weight, the amount of the mineral ingredients of the excrements is equal in weight to the mineral ingredients of the food.

As with the horse, so it is with all animals. *In all adult animals the excrements contain the ingredients of the soil according to the quantities and relative proportions in which they are contained in their food.*

The mineral substances of the food which have remained in the body of the animals, and served to increase their weight, are found again in the bones and excrements of man who consumes the flesh of these animals.

The excrements of man contain the elements of the soil, of bread or of grain, of vegetables and meat.

These discoveries explain, in a most simple and satisfactory manner, the fertilizing effect which manure produces on our fields.

It is now obvious why manure renders again fertile the exhausted fields; why, by its means, their productiveness can be augmented; why the latter is in a direct ratio to the quantity of manure administered.

The exhaustion of the soil by subsequent crops,—its decrease in fertility,—is produced by the gradual removal of the mineral elements, in a soluble state, which are necessary for the development of our cultivated plants. By a supply of manure they are again restored to that state suited to serve as nourishment to a new vegetation. If the supply of the removed elements of the soil, by means of manure, be sufficient; if the quantity taken away be restored, the original fertility re-appears; if the supply be greater, the produce increases; a defective supply gives a smaller produce.

It is now explained why the different kinds of manure exercise an unequal effect upon the fields.

The excrements of man, and the guano containing especially the mineral ingredients of grain and meat, exercise far greater influence on the amount of produce in grain in a field in which these ingredients are wanting, even if those of the leaves and stalks are present in sufficient quantity, than the excrements of an animal which feeds on roots or green fodder. The excrements of the latter contain the mineral elements of the leaves, stalks, and roots, in prevailing quantity, and have a greater value for the production of roots and foliaceous plants than those of man or of birds, which contain only a small quantity of those mineral substances which they require for their development.

If we compare, for instance, the composition of guano with the excrements of the cow—solid and fluid excrements in the same state of dryness—it is found, that in an equal weight, the latter contain five to seven times more of the mineral ingredients of turneps and potatoes, than the former. If, in a soil, which is deprived of all these mineral substances, we wish to force a crop of turneps by means of guano, we require at least five times more of guano than dung of cattle.

The same thing happens, though *vice versa*, if we wish to produce a rich crop of grain by means of animal excrements; in this case, one part of guano and five parts of animal excrements produce the same effect, as 13.15 parts of animal excrements.

To understand the proper meaning of these numerical proportions, it is sufficient to mention, that 400 pounds of bones contain as much phosphoric acid as 1000 pounds of wheat; these 400 pounds of bones can furnish sufficient phosphoric acid to 8 acres.

If we take the importation of bones into Great Britain, in the last ten years, to amount to one million of tons, enough phosphoric acid has been supplied to the fields for 25 millions of tons of wheat; but only a small proportion of the phosphoric acid of the bones is in a state to be assimilated by the plants and applicable to the formation of the grain. The plants, in order to apply the other far greater part of that phosphoric acid to their formation, must find a certain quantity of alkaline bases besides the bone earth, which are not given to the plants in the bones, because they contain neither potash nor soda.

To have increased the fertility of the fields in the right proportion, 800,000 tons of potash ought to have been added to the one million of tons of bones, in a suitable form.

The same is the case with guano; 60 to 100 pounds of it are sufficient to furnish phosphoric acid to one acre of turneps; but the four to eight fold quantity is required to furnish the turneps with the necessary alkaline bases, and it is still doubtful whether they can be at all provided with the latter, by means of the salts with alkaline bases, which the guano contains.

At a time, when the necessity of the mineral substances for the growth and development of the plants, and the direct relation which the effect of manure has to its amount of the same substances, had not been ascertained, a prominent value was ascribed to the organic matters which it contains. For a long time it was thought that the produce of a field of those substances, containing nitrogen, which serve as food for man and animals, stood in a direct proportion to the nitrogen contained in manure. It was believed that its commercial value, or its value as manure, might be expressed in per cents by its proportion of nitrogen, but later and more convincing observations have induced me to contradict this opinion.

If the nitrogen and carbonic acid formed by the decay and decomposition of the vegetable ingredients of manure, were the cause of its fertilizing power, this ought also to be seen if the mineral substances are excluded. Direct experiments have shown, that the nitrogen of the excrements can be assimilated by the plants, in the form of ammonia; but that ammonia as well as carbonic acid, although it is indispensable for the development of all plants, can accelerate the growth of plants and increase the produce of a field of grain, roots, and tubercles *only*, if at the same time, the mineral ingredients contained in the manure which is applied, are in a state in which they are suited for assimilation. If the latter are excluded, carbonic acid and ammonia have no effect on vegetation.

On the other hand, experience has shown that on many fields the produce which is rich in carbon and ammonia, can be increased to an extraordinary amount without any supply of such matters as furnish these substances.

On fields which are provided with a certain quantity of marl or slacked lime, or with bone earth and gypsum, substances which cannot give up to the plants either carbon nor nitrogen—rich crops are obtained in many places, of grain, tubers, and roots, entirely in contradiction with the view which ascribes the effect of the manure to its amount of ingredients containing nitrogen or carbonic acid.

To explain this process, which is so opposite to the common opinion, the marl, the lime, the gypsum, the alkalies, and the bone earth were regarded as stimulants, which acted on the plants like spices on the food of man, of which it was believed that they increased the power of assimilation, and allowed the individuals to consume larger quantities of food.

This view is contradicted, if we consider that stimulants mean such substantives as do not serve for the nourishment of the organism or for the formation of organic elements, and can only increase the weight of the body, if at the same time a certain increase of food is given. In supplying the fields with the above mentioned substances, the weight of the plants became increased in all their separate parts, without their having been provided with the quantity of food, which according to theory, was necessary to this extraordinary increase, viz., with carbonic acid and ammonia.

Chemical analysis shows that these so called stimulants are either actual ingredients of manure, as gypsum, bone earth, and the active substances of the marl, or that they are the means by which the mineral elements contained in the soil are resolved into a state adapted for being assimilated by the plants; this is generally effected by the application of slacked lime. They consequently exercise on the vital process of the plants not a mere stimulus like the spices, but are consumed for the development of the leaves, seeds, roots, &c.; they become constituent parts of them, as can be shown with certainty by chemical analyses.

The success which has followed the application of these substances to the fields has explained, in a most striking manner, the origin of the carbon and nitrogen in the plants.

In the marl, in the bone earth, in the gypsum, in the nitrate of soda, no carbon is provided to the fields; and yet, in many cases, the same produce, in some even a higher one was obtained, than by the application of a manure containing carbon and nitrogen. As the soil, after the crop, does not contain less carbonaceous or nitrogenous substances, it is evident that these products which had been obtained without any carbonic or azotic manures, must have got the carbon and nitrogen of their leaves, roots, and stalks, from the atmosphere; it follows therefore that the productiveness of the fields cannot be in proportion with a supply of carbonaceous and azotic substances, but that the fertility depends only on the supply of those ingredients which should be provided by the soil.

The soil does not only serve the purpose of fixing the plants and their roots; it participates in vegetable life through the absorption of certain of its elements. If these elements are present in sufficient quantity and in appropriate proportions, the soil contains the conditions which render the plant capable of absorbing carbonic acid and ammonia from the air, which is an inexhaustible storehouse for them, and renders their elements capable of being assimilated by their organism.

The agriculturist must, therefore, confine himself to giving to the field the composition necessary to the development of the plants which he intends to grow; it must be his principal task to supply and restore *all* the elements required in the soil, and not only one, as is so frequently done; the ingredients of the air, carbonic acid and ammonia, the plants can, in most cases, procure without man's interference; he must take care to give to his field that physical condition which renders possible and increases the assimilation of these ingredients by the plant; he must remove the impediments which diminish their effect.

The favorable influence which bone earth, gypsum, nitrate of soda, exercise on the fields has induced many farmers to the belief, that in applying them they can dispense with manure or with the other elements of the soil; it requires, however, only little attention to see the great error of this opinion. We observe that the effect of these substances is not equal on all fields; in one place the amount of produce is increased by the lime, by the bone-earth, and by gypsum; in another country, or on other fields, these substances in no way favor vegetation. From this arises the contradictory views of farmers regarding these matters as manures. If one farmer thinks the liming of his fields quite indispensable for rendering them fertile,—another declares that lime produces no effect at all.

The reason of this difference is very simple. The examination of a soil, upon which lime has had no effect, shows that it was already rich in this substance; it further shows that its effect extends only to those kinds of soil in which lime is wanting, or in which it is found in too small a quantity, or in a condition which is not suited to its assimilation by the plant. Lime especially serves for resolving the silicates of alumina (clay,) and consequently it cannot fertilize soils in which clay is wanting, for instance, sandy soils. It must be apparent to every one, that on the calcareous and gypseous fields of France and England one-half per cent. of gypsum or lime can have no influence at all on vegetation. This can be said with equal justice of bone ashes, and of every other mineral substance serving for the nourishment of plants.

If these substances exercise a favorable effect, some of the constituents of the soil or manure are restored, which are indispensable to the nourishment of plants, and which have been wanting in the soil. If this be the case the other bodies, equally necessary, must be present in sufficient quantity. On a field, in which sulphate of lime has acted favorably, and in which clover had been cultivated as fallow without it, the crop was 2200 pounds of clover hay, in which 53 pounds of potash were removed. On the same field, after it had been gypsed, 8000 pounds of hay were produced, which contained 191 pounds of potash. If this potash had not been present in the soil, the gypsum would have had no effect,—the crop would not have been increased. On fields, which are richly provided with all the other mineral ingredients, with the exception of gypsum, the latter is applied with the greatest success. But if gypsum is present in the soil, the same effects are produced by ashes and lime, as is the case in Flanders. On fields, in which phosphate of lime is wanting, bone ashes increase the produce of grain, clover, or grass, and on argillaceous soil, lime produces a decided improvement. All these substances act only on those fields which are defective in them, and if the other elements of the soil are present. The latter cause the former to come into action, and *vice versa*. The farmers, who thought that by using lime, gypsum, bone earth, &c., they might dispense with animal manure, very soon observed that their fields deteriorated. They observed that after a third or fourth successive manuring with those simple substances the produce decreased; that, as is the common expression, the soil became tired of the manure, that at last the field scarcely produced the seed.

It is evident from this, what is the action of the mineral elements in the soil. If in fact, in the first years, the produce of the soil had increasad by the application of bone ashes, or by a single element of the manure—if this increase was dependant on the amount in the soil of the other mineral elements, a certain quantity of those was annually taken up by the plants and removed in the harvest, and a time must at last arrive in which it is exhausted by the repeated removal; the soil must become barren, because of all removed elements, only one or the other, and not all of them, in a right proportion, have been restored.

The right proportion of the supply is, however, the only true scientific basis of agriculture.

If we subject the fluid and solid excrements of men and animals to an exact analysis, and compare the elements of them according to their weight, some constant relations between these elements impress themselves upon the mind, the knowledge of which is of some importance.

If the excrements of an animal are collected with some care and left to themselves for some days, their nitrogen appears to have been converted more or less perfectly, into ammonia. In the fluid excrements, in the urine, the salts of the food, which are soluble in water, are found in the form of alkaline carbonates, or of sulphates, phosphates, and other salts, with alkaline bases. In the solid excrements or fœces, silica, if it was contained in the food, earthy carbonates, and phosphates, are the principal ingredients.

The quantity of alkaline carbonates bears a certain proportion to the amylum, sugar, pectine, or the gum of the food. The urine of an animal which has been fed with potatoes or turneps, is rich in alkaline carbonates; the potatoes, however, consist principally of amylum; the chief ingredients of the turneps are sugar and pectine. The urine of a horse, which has been fed with hay and oats, is comparatively poor in alkalies, if compared with the former.

It is further shown, that the ammonia or the nitrogen of the excrements bears a certain proportion to the phosphates; the azote increases or decreases with the quantity of the phosphates in a manner that both can serve, as a measure for each other, although not quite as an accurate one. It is not quite accurate, because the gum and the amylum also contain a certain, although small, quantity of phosphate of lime, as has been proved in my laboratory.

The ammonia of the excrements is of course derived from the nitrogenous substances in the food; the phosphates are likewise constituents of the latter. In the composition of the food an equally constant proportion exists between both. A given weight of gluten or casein in peas or in grain always corresponds with a certain weight of phosphates; if the grain or the vegetable is rich in those azotic products of vegetable life, it is also rich in phosphates; if it is deficient in them, the quality of the latter decreases in an equal ratio.

As the amount of nitrogen in manure is a measure for its amount in phosphates, and as manure contains besides these also the other ingredients of the soil which are required by the grain or by the other vegetables for their development, and taken up by them from the soil, it is easily conceived what was the cause of the error in regarding the azote of the manure as the principal cause of its efficacy. The reason was, that the ammonia of the manure is always accompanied by the mineral elements which affect its nourishing qualities, because they render its assimilation into the organism of the plant and its transition into a nitrogenous constituent possible. Without phosphates, and without the other mineral elements of the food of plants, the ammonia exercises no influence whatever upon vegetable life.

If it has been shown that the fertility of the soil depends on certain mineral substances; if the restoration of the fertility of exhausted fields by means of the excrements of man and animals depends upon their proportions of these matters; if the effect of the manures *accelerating* the vegetation depends upon their proportions of ammonia, it is clear that we can only dispense with the latter when we provide *all* efficacious elements exactly in those proportions and in that form most proper for assimilation by the vegetable organism in which they are found, in the most fertile soil or in the most efficacious manure.

According to our present knowledge of the effect of the constituent parts of manure, I feel convinced that it is indifferent to the plants from which source they are derived. The dissolved apatite (phosphate of lime) from Spain, the potash derived from the felspar, the ammonia from the gas works, must exercise the same effects on vegetable life as the bone earth, the potash, or the ammonia, which we provide in manure.

We live in a time when this conclusion is to be subjected to a comprehensive and accurate trial, and if the result corresponds with the expectations which we are entitled to make, if the animal excrements can be replaced by their efficacious elements, a new era of agriculture must begin.

I invite the enlightened farmers of England to unite with me for that purpose, and to lend me their aid

Whatever may be the result of these experiments, it is necessary for the future prosperity of agriculture that they be made. They will enrich us with a number of valuable facts—we shall ascertain where we have wasted efficacious matters in the common course of farming—we shall acquire an exact knowledge of those substances which are necessary, and of those which are dispensable.

For a number of years myself and many young talented chemists have been occupied with the analyses of those mineral substances, which are constituent elements of our plants of culture, and with the examination of the excrements of man and animals, well as of a great number of soils acknowledged as fertile. These labors have been laid before the scientific world long since, but only a very confined application has been made of them in agriculture.

The farmer is by his position not in the condition to procure and to command the efficacious elements necessary for the restoration and increase of the fertility of his fields in a right proportion and suitable form. For this purpose, science and industry must combine their aid.

I have been fortunate to remove the difficulties which are opposed to the application of a mere mixture of the elements of manure. If we employ the different elements of manure exactly in those proportions in which they are necessary according to experience, for a rich crop of wheat, peas, turnips, potatoes, and if, at the same time, we leave them in their common state, they do not produce that effect which we might have expected; the cause of this is, that the different elements of manure possess a very unequal solubility, the ammonia evaporates, the soluble elements are carried off by the rain, and the effect is more in proportion with the amount of those ingredients of the manure which are less soluble.

I have found means to give to every soluble ingredient of manure, by its combination with others any degree of solubility, without altering its effect on vegetation. I give, for instance, the alkalies in such a state as not to be more soluble than gypsum,* which as is well known, acts through many years, as long as a particle of it remains on the acre.

The mixture of the manure has been adapted to the mean quantity of rain in this country; the manure which is used in summer has a greater degree of solubility than that used in winter. Experience must lead to further results, and in future the farmer will be able to calculate the amount of produce of his fields, if temperature, want of rain, etc., do not oppose its coming fairly into action.

I must, however, observe that the artificial manures in no way alter the mechanical condition of the fields, and they do not render a heavy soil more accessible to air and moisture. For such fields, the porous stable manure will always have its great value; it can be given together with the artificial manure.

All manure which is to be used during next winter contains a quantity of ammonia corresponding with the amount of nitrogen in the grain crops which are to be grown. Experiments, in which I am at present engaged, will show whether in future times the costs of this manure can be greatly lessened by excluding half or the whole amount of ammonia.† I believe that this can be accomplished for many plants, as for clover and all very foliaceous vegetables, and for peas and beans; but my trials are not so far advanced as to prove the fact with certainty.

Giessen University, 1845.

INDIAN CORN FOR FODDER.

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Luther Tucker, Esq.—Your correspondent H., of Ohio, inquires if there is no easier mode of curing corn stalk fodder than "to reap the stalks, bind them in small bundles, and stack them up?" I offer my experience for what it is worth. Three years ago this month, I sowed the first corn I ever undertook to raise for fodder. The field contained about two acres. I began sowing broadcast, and having sowed about half the field, I happened to think that it would be as well to experiment a little, and accordingly struck out the rest in drills, 2¼ feet apart, and sowed the corn thick in the drills. By the first of July the weeds were so thick among that which was sown broadcast, that one could hardly tell what crop was the rightful proprietor of the soil, while that which was sowed in drills, having been cultivated once or twice, was growing vigorously. So I put the plow in, and turned under the whole crop, which was sown broadcast, and then struck out the land in drills and sowed again. The rest was cut when in tassel, and I experienced great difficulty in curing it, and after I thought it was perfectly dry it was put in the barn, and in a week I had to take it all out and spread it again. The second planting, however, was not in tassel till frosts came, and indeed, it was a little nipped by frost before it was cut; but the cold weather prevented its heating, and after lying three days after cutting, it was put in the barn, and kept perfectly well all winter. Since then I have followed this plan, and have had no farther accident. I plant from 5th to 10th July, in drills 2¼ feet apart; keep the weeds under till the corn shades the ground, after which they give no trouble; cut about the last week of November, with a stalk knife, (grasping an armful, cutting them off and laying them in the rows.) I leave them thus for three or four days, and then either put them in the barn or stack them for the winter.

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GRAFTING GRAPE VINES.

Another correspondent inquires about grafting grape vines, and as I have had some experience in that also, I will give it, and think I can convince him that it requires no great skill or nicety. In January, 1844, I was setting out foreign vines in a green-house, and thinking I might gain time by grafting, I went into my vineyard and selected twelve Isabella vines of not less than an inch in diameter at the surface of the ground. These I took up with the greatest care and planted just in front of my green-house. I then carried the stems through the foundation and cut them off inside, about three inches under ground; split them and inserted two scions in each. I did not bind them, but simply pressed the earth tightly about them, and every one took They showed plenty of fruit the next year; but I only allowed them to bear a few bunches, which they ripened well. This year they are growing with wonderful vigor, and are covered with fine bunches of grapes, while the young vines planted at the same time will not be ready to bear these two years. Since then I have grafted vines in every month from February till June, and with equal success, and therefore conclude that *if grafted under ground* there need be no difficulty about it. H. W. S. C.

Oatlands, Burlington, N. J., May 20, 1846.

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* Equal parts of carbonate of potash and carbonate of lime, (chalk) melted together will dissolve in 400 parts of water. Increase of chalk lessens, while a larger proportion of the other ingredient increases the solubility. E. N. H.

† Dr Krocker, in this laboratory, has determined in the course of the last term, the ammonia present in most soils of great varied physical properties. The results are still unpublished: but he remarked to me one day that if the ammonia per centage of the soil then in hand, be estimated as constant through a depth of one foot, the ammonia in an acre was about 8.000 lbs!

Even in sand destitute of soluble mineral salts, and nearly so of organic matter he found a per centage that was startling. Indeed the sum of his results is that the ammonia is in nearer relation to the moisture than to anything else.

I found ammonia in the glaciers that come down from heights of 14,000 feet above the level of the sea—from near the summit of Mt. Blanc. Even at that height the ammonia is still in quantity that may be weighed Every rain and snow storm brings this ingredient to the earth. Every soil that can retain its moisture will also retain the ammonia that descended with it Hence one cause of superiority of a soil containing much decayed vegetable matter or much humus It enables it to hold moisture, as well as furnish a source of carbonic acid A rod dipped in muriatic acid and held near the surface of a handful of moist soil will cause white fumes to rise, occasioned by the combination of the ammonia with the muriatic acid. A gentle breath directed along the surface of the earth experimented with, will render the fumes more apparent.

E. N. H.

VIRGINIA FARMING.

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L. TUCKER, ESQ.—Being a constant reader of the Cultivator, and not finding many communications from this part of the valley of Virginia, I thought it would not be intruding too much on your time to read an account of our farm, which is called the "Plains." This farm was taken up by a Mr. James Wood, and patented on the 12th day of January, 1746, exactly one hundred years ago this day. It was sold some four or five times, until my father bought it in the year 1829. My older brother moved on it in the year 1833, and was on it until 1835. He then bought a farm adjoining the town of New-Market, and I moved to this place, where I have been since. When my father bought this farm it was in very bad order; there was not a good pannel of fence on it, and not a single gate; the roof of the barn had been blown off by a storm and the barn-yard was only fenced in by an old rail fence, and not an acre of clover was on the place. The land was worked on the skinning system." The barn-yard was so full of old manure that it was almost impossible to get to the barn, and some of the fields were so poor that one of them produced only *four bushels* of rye per acre, in the year 1837. The land lies well for cultivation; it is not very hilly, but there are about 100 acres of it a black marl bottom, and about 150 acres of upland, which is a sandy clay; there are also about 165 acres of wood land attached to it. We have run a lane through the centre of the farm so that we can let the cattle run from the barn-yards to any of the fields. We have hung 32 gates to the yards, lane, and fields, so that we can get about without ever tearing down any fence. The gates are made on the plan that you published in your January number, page 18. There is a spring on the adjoining farm which runs through our bottom land and empties into the Little Shenandoah river that passes along the edge of our farm. We have a merchant mill on the bank of the river which is run by the spring branch; we have also a saw mill which is run by the river. The spring branch runs through the edge of the cattle yards, so that the cattle can get water at all times. The lane also has communication with the spring branch, so that the cattle can come from any of the back fields to the branch for water. We have graded a greater part of the lane, and have turnpiked nearly all the low places, so that we can get along at all seasons of the year. We have adjoining the barn three yards, with sheds, for the cattle, one yard with a shed for the sheep, and a horse stable with a large yard, in which is a shed for wagons, cariole, cart, and farm implements, also two small buildings for saddles and tools. The saw-mill is only about 100 feet from the cattle yards, so that we can easily haul all the saw dust to the horse stable and cattle yards, which we find a very good article for absorbing the liquids of the manure. We also find that tan bark is a very good article for the same purpose; we therefore have adopted the plan of bringing a load along when we take corn, flour, &c., to New-Market, which is only three miles from this place. We have improved the land very much with clover, plaster, ashes, and manure, and a proper rotation of crops. We find that the following rotation is very suitable for this farm.

First Year.	Second Year.	Third Year.	Fourth Year.	Fifth Year.	Sixth Year.
Corn with Manure.	Oats.	Wheat.	Clover with plaster and ashes.	Ditto.	To be pastured.

Seventh Year.	Eighth Year.	Ninth Year.	Tenth Year.	Eleventh Year.	Twelfth Year.
Fallow.	Wheat.	Rye or bearded wheat, with short manure.	Clover with plaster and ashes.	Ditto.	To be pastured.

By the above system you will find that we have six fields in clover, three in wheat, one in oats, one in corn, and one in fallow. The best parts of the four clover fields are mowed, and the other is left to rot on the ground; the two other clover fields are pastured but lightly, as we send all our young cattle and sheep to our mountain farm, on the head of the river. We find that plaster and ashes have a very good effect on the upland, but on the marl bottom it does not have any effect. The upland is very good for clover, and the bottom is very suitable for timothy. The upland had a considerable quantity of loose rocks, but we hauled nearly all of them into the lane, and into several sink holes and dragged earth over them with the road scraper. There were also a great many rocks in the fence corners that were hauled there some years ago; we also hauled hauled them into the sink holes.

We have a pond at the mill which we have cleaned out several times, and hauled the mud, composed principally of marl, on the wheat fields, and harrowed it in with the wheat. It has proved a very good article on the upland, answering better than stable manure in the adjoining field. The last year we hauled out 131 four horse loads of the mud, 154 loads of barn yard manure in the spring, and 84 loads in the fall.

The year 1845 was very dry in this part of the valley, so that all summer crops were very short, but the wheat yielded tolerably well. The following was the quantity of hay, &c., raised on the Plains farm in the year 1845.

30 wagon loads of hay; 672 bushels of oats; 31 bush. [illegible]; 112 bush. potatoes; 650 corn; 900 wheat

We have 119 sheep, 35 head of cattle, and six horses. We have a corn fodder machine which is run by a two horse power; It is the middle size of "Eastman's Patent." It was made too weak, so that we had to take it through a thorough repair, but now it does tolerably well. We have large mangers in the cattle sheds, where we feed the cut corn fodder in the evening, and straw in the morning. The sheep get straw in racks in the morning, and hay in the evening, but when the snow is off the ground they are permitted to run to the field that is to be put into corn in the spring; we then give no hay, but only straw. We also give a bucket full of oats to the 119 head, every evening and morning, in small mangers. The sheep-racks are made on the plan that the "Economs" have them in Germany. We have tried the "feeding boxes," but do not like them as well as the racks. When the manure is hauled out of the sheep-yard in the spring, we plow it up, and plant cucumbers, melons, beans, &c., which do very well, as the ground gets very rich by the sheep manure.

By attending to the sheep on the above plan we have very good *luck* with the lambs. Last spring we raised 29 lambs out of 32. Our sheep are grade Saxons, which seem to suit our climate very well. We put the rams to the ewes the latter part of October, so that the lambs will come the latter part of March, which is the best time for this part of the country; the lambs will then be able to travel to our mountain farm, after the ewes are sheared, which is the first week in May. Our young cattle are also then taken to the mountains, so that we

have but little stock on the "Plains" farm all summer.
SIRAM P. HENKEL.

Plains Mills, Rockingham, Va., 1846.

[The above communication has been mislaid, or it would have appeared before.—ED.]

NUTRITIVE PROPERTIES OT PEAS AND BEANS.

Experience and observation induced us, long since, to form a very favorable opinion of the nourishing properties of peas and beans. The hardy lumbermen of Maine, in laying in a stock of provisions for their winter support while engaged in cutting down the forest, never fail to secure a large supply of these articles; and we have been repeatedly assured by men engaged in that laborious business, that their ability to labor was greater when their food consisted in a large degree of peas and beans, seasoned with fat pork, than when feeding on other substances.

Oats and peas are known in some parts of our country, as forming the very best food for hard-working horses. And we have formed, also, a favorable opinion of peas and beans for fattening. We cannot, however, say that their value is not greater for laboring, than for fattening animals—as chemical analysis seems to indicate—but we *know* that sheep have been fattened rapidly on beans and bean meal, and we have often seen hogs well fattened on meal of oats and peas ground together in the proportion of one part peas to two of oats, by measure; which would make the proportion by weight about equal. We never heard any objection to the quality of pork so made.

But we think careful experiments are necessary to show the relative value of peas and beans compared with other substances, (Indian corn for example,) in feeding different animals for different purposes. If peas and beans are, as is contended by some chemists, better than corn for the production of wool, let it be practically demonstrated;—if corn is better for making mutton, let it be shown—let us have FACTS, and no theories but what are based on them.

The value of peas and beans for human food is strongly set forth in the following extracts, which we take from an article by Dr. BUCKLAND, published in an English paper. He remarks that the seeds of leguminous plants, "especially peas and beans, are loaded with the constituents of muscle and bone ready prepared to form and maintain the muscular fibre of the body of animals." "Hence," he says, "the rapid restoration of the shrunk muscle of the exhausted post-horse by a good feed of oats and beans. Hence the sturdy growth of the Scotch children on oat-cake and porridge, and of broth made of the meal of parched or kiln-dried peas; on this a man can live, and do good work, for 1½d. a day; while the children of the rich, who are pampered on the finest wheat flour, (without the pollard or bran,) and on sago, rice, butter, and sugar, become fat and sleek, and would often die, as sometimes they do, from such non-nutricious food, but for the mixture of milk and eggs they eat in cakes and puddings.

"An old laborer at Axbridge, complained to his master, Mr. Symons, (who died in 1844,) that laborers feeding now on potatoes, could not do so good a day's work now as when he was young, and when they fed on peas. 'Peas, sir,' said he, 'stick to the ribs.' He uttered the very truths of organic chemistry.

"In beans we have vegetable 'caseine,' or the peculiar element of cheese. What is more restorative or more grateful to man, when fatigued by labor or a long walk? As we heat or toast it, it melts, and ere it reaches our mouth, is drawn into strings of almost ready-made fibre; and who has ever dined so fully as not to have room left for a little bit of cheese?

"What is so restorative as beans to the jaded hack or the exhausted race-horse? Sepoys on long voyages live exclusively on peas. The working and healthy man and beast want muscle, and not fat; fat encumbers and impedes activity and every excess of it is disease. We seldom see a fat laborer or a fat soldier, except among the sergeants, who sometimes eat or drink too much.

"Charcoal, which next to water, forms the chief ingredient in potatoes, is subsidary to life, though not to strength. The same is true of the charcoal, which is the main ingredient of rice, sago, sugar, butter, and fat. The woman at Tutbury, who pretended to fast for many days and weeks, sustained life by secretly sucking handkerchiefs charged with sugar or starch. During the manufacturers' distress in Lancashire, five years ago, many of the poor remained in bed covered with blankets, where warmth and the absence of exercise lessened materially the need of food. When Sir John Franklin and his polar party travelled on snow nearly a fortnight without food, they felt no pain or hunger after the second day; they became lean and weak by severe exercise and cold, but sustained life by drinking warm water and sleeping in blankets with their feet round a fire; alas, a knowledge of such facts may become needful and useful in the approaching winter.

"It has been already stated that the most nutritious of all vegetable food is the flour of peas, which was the staple food in Europe before potatoes. The flour of kiln-dried peas stirred in hot water makes a strong and pleasant Scotch brose, on which alone a man may do good work. Barrels of peas brose flour may be brought from Scotland, or prepared in England wherever there is a malt-kiln.

"In England, pea-soup and peas pudding are still a common and most nourishing food. Our forefathers and their children, we know from nursery rhymes, ate

'Peas pudding hot, peas pudding cold,
Peas pudding in the pot, and nine days old.'

"Let us for a part of this and next year once live as they lived 300 years ago. Boiled or fried slices of peas pudding are not unsavory food; and what boy would not prefer parched peas to nuts?

"Oat cake is the bread of all Scotland, and of much of Ireland, and of the North of England; and oatmeal made into broth and porridge is the universal and almost the only food of highland children. Let those who have quailed under the charge of a highland regiment tell the results.

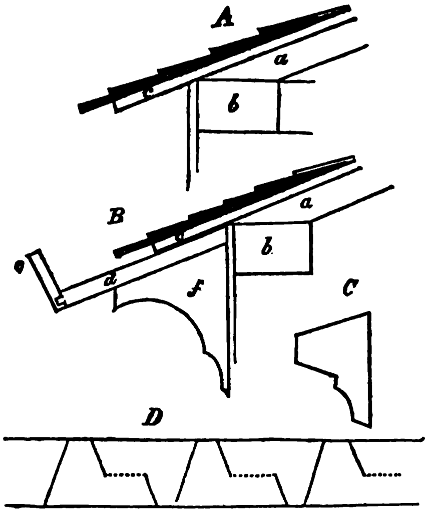
"Bread made of rye is the chief food of farmers and laborers in Germany and the north of Europe; it is of a dark color, and little used with us, but it is very nourishing, and in time of scarcity is a good substitute for wheat.

"Indian corn or maize is the food of man over a large part of the world, and makes bread and cakes, not very palatable to us, but better than nothing! in times of scarcity."

Dr. B. places a low value on our much-esteemed Indian corn,—admitting only, that it makes "bread and cakes" which are "better than nothing in times of scarcity!" The taste for different articles of food is undoubtedly formed in a great degree by habit. The Esquimaux relish the raw flesh and blubber of the seal—our American Indians their parched corn and bear's oil—the Scotchman his broth of oats or peas, or bread made from those articles—while we in this country, who have duly learned the "art and mystery" of cooking Indian corn, consider it equally as "palatable" as any other article of bread-stuffs.

DESTROYING WEEDS.—S. W. Jewett, of Weybridge, Vt., says he finds nothing equal to sheep for destroying ox-eye daisy, johnswort, and other troublesome weeds. "They must be stocked down early, if covered with johnswort, the plant being poisonous to those animals after it obtains rank growth."

SUCCESSION OF APPLES.—An eminent cultivator of fruit near Boston, gives the following as a good list for a succession, commencing with the earliest:—Heath's Early Nonsuch, Early Harvest, Porter, Gravenstein, Fameuse, Greening and Baldwin, and the Russets. He also adds, as fine, Red Astracan, Williams' Favorite, St. Lawrence, White Seek-no-farther, Yellow Bellflower, Lyscom, Canada Reinette, and Murphy. And of sweet apples, Bough, Sugar Sweet, French Sweet, Danvers' Sweet, Gardiner's Sweet, and Seaver Sweet



EVE TROUGHS.—(Fig. 66.)

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A good and cheap eve trough for farmer's dwellings and out houses, is very much wanted. Those made of hewn timber hollowed out are costly. Zinc plate, placed on the roof, turned up in front by a strip of timber, and shingled on, are neither good-looking nor very valuable.

In a laborer's cottage, lately erected, we adopted the mode represented in section in the annexed figure, and found it by far the cheapest that ever came to our knowledge, and quite as good and neat in appearance as any. Fig. *A*, represents the eves of a roof of the very simplest construction, *a* being the lower end of the rafter, resting on the plate *b*, and covered by the roof-board *c*, projecting a few inches. Fig. *B*, exhibits the same roof with the eve trough attached; which is done by placing a sound and durable inch and a half plank *d*, (or even an inch board will do,) directly under the roof board, and projecting several inches beyond it, supported by a common cornice,—or more cheaply, and, if the architecture accords, more gracefully, by brackets, as represented by *f*. The narrow strip of board or plank, *e*, is added by matching, forming the trough. A coat of hot tar, or better, of good paint, finishes the trough. It would, however, be better, and would cost comparatively little, to get a piece of tin or zinc, a few inches wide, and equal in length with the house, bent in the shape of this trough and laid into it as a lining. This could be brought in a roll from the tin-shop, and bent and fitted on the spot.

A bracket for support, easily made, is represented in fig. *C*, which is cut from a plank without waste, as shown by fig. *D*, where the cross lines show the marks for the saw, and the dotted lines the parts separated by splitting.

THE POTATO.

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In the last number of the Cultivator, I observe an extract from H. R. Schoolcraft's "Report on the Iroquois," in which the opinion is given that "the potato was certainly indigenous" to this region; and that Sir Walter Raleigh took it from Virginia to Europe under the original name of *openawk*. I believe however, that we have no facts sufficient to warrant these conclusions. None of our botanists have marked down the potato as one of our indigenous plants; and it is not presumable that one of such magnitude and importance could remain unknown to them, if it had been indigenous.

But it will be proper to inquire if the cultivated potato and the "openawk" are identical? In the Library of Entertaining Knowledge, part 29, page 125, we have the following description of the latter from Thomas Heriot's account of Virginia, who was amongst the first settlers of that colony. "The roots of this plant are round, some as large as a walnut, others much larger—they grow in damp soils, *many hanging together as if fixed on ropes.*" Now it is clear that this description will not apply to the common potato, but *most exactly* to *Apios tuberosa*, which Dr. Barton* calls the "Wild Potato-Vine"—which Elliot† says "formed an article of food to the aborigines"—and which Pursh‡ asserts to grow sometimes "to an enormously large size." We have no other indigenous plant that will agree with Heriot's description; and he adds that the tubers "are good either boiled or roasted." So are those of *Apios tuberosa*. It therefore appears conclusive to me that in the case referred to, it has been mistaken for the common potato. D. T.

Cayuga Co., 6 mo. 13, 1846.

BUTTER-WORKER.

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Mr. Tucker—I have seen in your June Cultivator, a communication over the signature of Robert White, Jr., giving a description of his Butter-Worker. He states that having seen a description in your paper of one exhibited at Worcester, he wrote there, requesting a more particular description, but received no reply. In December, 1844, I received a letter from Mr. White, requesting the information mentioned, and in a few days after wrote to him, giving a minute description of its several parts. I regret that he did not receive the answer sent him, as I am not willing to be considered as wanting in that courtesy that is due from one farmer to to another. I can only account for the non-reception of my letter by the belief that it has arisen from misdirection. I addressed him at Shrewsbury N. J., from whence his letter was written, and his late communication bears date from New-York. I should, however, not have troubled you with an apology for my imputed neglect, except as it furnishes me with an excuse for offering some objections to the manner of the construction of his machine, which I think may be readily obviated, and the instrument improved. The flutes or creases are too numerous, and so deep that I think they will cause the butter to adhere to the roller, and thereby occasion trouble, particularly when the butter is soft, as it is taken from the churn. Believing my instrument, which has been in use for several years, is more useful than his, although there is some similarity between them. I will give a description, referring to the diagram in your June number, and using the same letters for the same parts; that if any of your subscribers are disposed to make a butter-worker for themselves, they may have, the use of two machines, on which to make such improvements as they may deem expedient.

A, a fluted roller, 15 inches long, 6 inches in diameter at the large end next the handle, and 3 inches at the small end; 8 flutes or creases; the creases are alternate hollows and rounds; the depth of the hollows, measured by a straight line on the top of the rounds, is only one-fourth inch, and this has been found sufficiently deep for any useful purpose. My roller has a hole longitudinally through its centre 1¾ inches in diameter, and the handle, *B*, *C*, is of one piece separate from the roller, and on which the roller revolves. The handle *B*, is 16 inches long and 2 inches in diameter from the extreme end to the shoulder against which the roller turns, and 27 inches long and 1⅜ inches in diameter from the said shoulder at *E*; the ball *D* is dispensed with, instead of which a hole one-half inch in diameter is made through the small part of the handle, about two inches from the end. *E*, is a perpendicular iron, ½ inch in diameter, fastened to the table *G*, on which the handle turns, with small holes made through it, in which a wire is passed to keep the handle in place. This will be found equally as good as the ball and socket, and much more simple. The marble block *I*, is comparatively an expensive part of the apparatus, and by the advice of my tenant's wife, has been laid aside, and a thick board of hard wood has been substituted. She objects that the marble extracts the color from the butter, which has much influence upon the taste of all but the blind.

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* Compendium Floræ Philidalphicæ, vol. 2, p. 82.

† Sketch of the Botany of South Carolina and Georgia, vol 2 p. 232.

‡ Flora Americæ Septentrionalis, page 473.

Several years' use of this butter worker has furnished satisfactory evidence that by it much of the labor of making butter may be saved, and the butter made of a better quality. Under no circumstances should the hands ever be allowed to come in contact with the butter, either in its manufacture or packing.

John W. Lincoln.

Worcester, June 9, 1845.

NITROGENOUS MATTER IN OATS.

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Mr. Tucker.—I notice in the April number of the Genesee Farmer for 1846, mention of some apparent mistakes in Prof. Johnston's comparison of flour from oats and wheat. The table given is as follows:

	Wheat.	*Oats.*
Muscular matter,.....	10 lbs.	18 lbs.
Fat,.................	3 "	6 "
Starch,.............	50 "	65 "
	—	—
	63	89

The editor of the Farmer says—"if 100 lbs. of fine wheaten flour contain but 63 lbs. of starch, gluten, (muscular matter,) and fat, all told, what shall we call the other 37 lbs. of something, in 100 lbs. of dry flour?"

I think there is undoubtedly a misprint in the quantity of starch given above. The average quantity obtained by Vauquelin, Zenneck, Payen, and others, is between 60 and 70 per cent. To this is to be added the gum, the ash, and a small quantity of woody fibre, beside from 8 to 14 per cent. of water, which is always to be obtained from what is considered the dryest wheaten flour or oatmeal.

The editor of the Farmer then proceeds to quote the following table from Prof. Johnston;

The grain of	wheat	contains f'm 8 to 35	per ct. of gluten.
"	rye	" 9 to 13	"
"	barley	" 3 to 6	"
"	oats	" 2 to 5	"

He then says:—"How wheat, as is well known, can yield from 8 to 35 lbs. of gluten in 100, and oats only from 2 to 5 lbs., and yet oatmeal contain 80 per cent. more *gluten* than wheat flour, passes our comprehension. Indeed the statement is an absurdity."

This paragraph seems entirely founded on a misapprehension of Prof. Johnston's meaning. The above table is intended to show only the proportion of *gluten* alone, not of nitrogenous compounds. It is true that the oat has very little gluten; but it has a body analogous in many respects to the casein of milk, which has been called avenine.

The editor of the Farmer must be aware that the proteine of Mulder, forms, as it were, the type of a class of bodies precisely similar in composition, with the exception of certain proportions of sulphur and phosphorus; among these, are fibrin, vegetable albumen, the serum of the blood, &c. To this class also belong the gluten of wheat, and the casein or avenine of oats. Gluten is composed of proteine 10, sulphur 2; casein of oats, proteine 10, sulphur 1. The casein of oats is therefore fully equal to the gluten of wheat, and the mistake in the above paragraph arises from the supposition that gluten is the only body in the oat which goes to the formation of muscle.

As to the quantity of this substance in comparison with that of the gluten in wheat, Prof. Johnston is no doubt nearly correct. I have found it as high as 22 per cent., though I should be inclined to place the average at 16 per cent. Now though some wheat has been found to yield more than 30 per cent. of gluten, the average of the trials of Vauquelin, and other authorities, is but little more than 10 per cent.; the advantage is therefore clearly with the oat.

Prof. Johnston is also perfectly correct as to the quantity of fat yielded by the oat, many trials having been made in his laboratory during the two past years. My own trials have all given from 5 to 7 per cent of oil.

As to the comparative value of oatmeal and wheaten flour, I shall perhaps at a future time write more at length; at present I will only say, that experience in Scotland fully bears out Prof. Johnston's analyses.

John P. Norton.

Farmington, Ct., June, 1846.

WOOL-GROWING IN THE MOUNTAINS OF NORTH CAROLINA—WILL IT SUCCEED?

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Mr. Tucker—In reading Morrell's "American Shepherd" I find the following in relation to sheep husbandry in the mountains of North Carolina, p. 146-7: He says:—"In large districts of the mountainous portions of North Carolina, sheep can be reared at perhaps as little expense as any section of the United States." Then follows an extract from a letter addressed to Mr. Skinner, by the Hon. T. L. Clingman, of North Carolina, designating some of the districts in that state best adapted to wool growing, embraced in the counties of Yancy, Haywood, &c. Mr. C. says, the elevation of Burnsville, the county seat of Yancy, is about 2,900 feet above the level of the ocean, and that the general level of the country is much higher. The climate is represented as being delightfully cool in summer, the mercury seldom rising higher than 70 or 80 degrees. Very little of the country is said to be too rough for cultivation. A large portion, it is said, is a sort of elevated table land, undulating, but not too much broken. "Even," says Mr. C., "as one ascends the higher mountains, he will find occasionally on their sides flats of level land containing several hundred acres in a body. The top of the Roan, the highest mountain in the country except the Black, is covered by a prairie for ten miles, which affords a rich pasture during the greater part of the year. The ascent to it is so gradual that persons ride to the top on horse back from almost any direction. The same may be said of many of the other mountains. The soil of the country generally is uncommonly fertile, producing with tolerable cultivation, abundant crops. What seems extraordinary to a stranger, is the fact that the soil becomes richer as he ascends the mountains. The sides of the Roan, the Black, the Bald, and others, at an elevation even of five or six thousand feet above the sea, are covered with a deep rich vegetable mould, so soft that a horse in dry weather sinks up to the fetlock. The fact that the soil is frequently more fertile as one ascends, is, I presume, attributable to the circumstance that the higher portions are more commonly covered with clouds, and the vegetable matter being thus kept in a cool moist state while decaying, is incorporated to a greater degree with the surface of the earth, just as it is usually found that the north side of a hill is richer than the portion most exposed to the action of the sun's rays."

Now, Mr. Editor, I think that time and experience will teach that the mountains of North Carolina are unsuitable for sheep, especially those portions alluded to by Mr. C., in the preceding extract. I formerly thought with Mr. C., that in time it would become a fine sheep country; but since I have turned farmer, and kept sheep, I think those who embark in the sheep business in that section will be disappointed.

In another part of Mr. Morrell's work, p. 193, he says: "The soil most suitable for sheep is a dry one. It is emphatically an upland animal, and loves the short and varied herbage of hill and mountain slopes, provided the soil is not poachy from an excess of moisture. To no other domestic quadruped is water more repugnant, unless when necessary to lave its thirst, as will be seen in its aversion to crossing streams, and always selecting the driest points for feeding and rest.

These mountains have a cold damp climate, the summits of the highest being covered with clouds and mists a large portion of the summer season. Cold rains are of frequent occurrence, doubtless causing the deep vegetable mould alluded to by Mr. C. There the geologist will see rocks crumbling to pieces, and large fragments tumbling down under the influence of cold and water, of which the *Grandfather* is a remarkable example. This is a high mountain lying within Ash and Burke counties. According to Prof. Mitchell, it is 5,556 feet above the level of the sea, and according to the same author, the Roan is 6,038 feet high; the highest point of the Black mountain, 6,476 feet, being more than 200 feet higher than Mt. Washington, which was formerly supposed to be the highest mountain in the United States east of the Mississippi.—[See Silliman's Journal, vol. xxxv., p. 377.]

A large portion of the county of Yancy is an elevated table land, which is so damp and cold that the inhabitants frequently do not raise corn sufficient for their own consumption. This I learned from Mr. McCall, an old gentleman who resides and has spent most of his life in the North Cove, on one of the branches of the Catawba river. While I was at his house, several men came there on horseback from the high table land above, after corn to make bread for their families. This was in July of 1842. From McCall's I rode on horseback up the "winding stairs," and across a table land thinly settled, (28 miles,) to Mr. Husted's, at the foot of the Yellow Mountain, which is a spur of the Roan. Mr. Husted informed me that he did not attempt to raise corn on account of the cold—that in many seasons there was scarcely a month in the year without frost. With Mr. Husted I walked over the Yellow to the top of the Roan, which was enveloped in a fog, to our great disappointment, for it is said that five states can be seen from its summit. We descended on the other side to Evan Hughes', and spent the night. The next day Mr. Hughes ascended the Roan with us, and again the damp clouds rolled over the mountain, driven by a cold wind. Mr. Hughes, who had charge of some cattle that fed on that mountain, told us that he had been on its top the 25th of June, when a snow storm arose and completely covered the mountain with snow, and that there were few days in the year but that it was foggy on the Roan. After Mr. Hughes left us we got lost in the mist, and with great difficufty regained the house at the foot of the Yellow, after dark. Those who wish to enjoy a mountain view in North Carolina, should always go prepared to encamp on its top, and in the morning, before the rays of the sun cause the mists to arise, they will generally have a glorious prospect, realizing more than their anticipations. I have ascended most of the high mountains in that state, and rarely without encountering a storm, or finding their tops covered with mists, which disappeared in the cool of the evening, to be resumed by the warming rays of the morrow's sun. In encamping on the mountains, I generally found the thermometer to range from 45 to 60 degrees, and on the high mountains, during the day it seldom rose above 65. The inhabitants of the valleys pay great attention to the raising of cattle and horses, which, in the summer season, are turned upon the mountains in what is termed "the range," which consists of tall weeds, native grasses, and in many places white clover has become naturalized. The owners of the stock cut out small troughs in logs which are there termed "lick logs," in which they salt the cattle every one or two weeks, at which times they generally take their guns, and encamp, and hunt a day or more for deer and bear, both of which are abundant. Many of the high mountains are covered more or less with balsam trees, (*Abies fraseri* and *Abies nigra*,) which delight in cold damp situations. The Black Mountain is nearly covered with these trees, from which it has its name. Beneath these trees there is often spread a thick carpet of moss and sphagnum, or peat moss, with a vegetation similar to that of the White mountains and Canada. At Billy White's, near the Grandfather, I found Mrs. White keeping house with his eldest son and some children, while Billy had gone to some more favored region to raise corn for the family, which cannot be raised near the mountain on account of wet and cold.

These remarks will apply more or less to the mountainous region of Haywood and Macon counties, from which we conclude that they are not suitable to the raising of fine-wooled sheep, judging from their elevation, damp and cold climate, which, as before remarked by Mr. C., creates a deep vegetable mould, in which a horse will sink up to the fetlock. And would not sheep sink in also, and be liable to have the foot rot? And in yeaning time would not many lambs be lost from the frequent cold rains so common there during the month of May. Should any think of grazing sheep in that region, let them at least, before doing so, examine and go over the mountains, and should they conclude to embark in the business and finally succeed, I for one would be glad, because I love those mountains. While among the Cumberland mountains, in Tennessee, I heard frequently of large mountain tracts there having been sold at the North, and when the purchasers came on to examine their property, they found it comparatively worthless. This is merely alluded to as a warning to others who might be disposed to purchase mountain tracts in North Carolina before seeing them.

Yours truly, S. B. BUCKLEY.

West Dresden, Yates Co., N. Y, June, 1846.

HOVEY'S STRAWBERRY.

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IN a late number of Hovey's Magazine, I am charged with having committed "*three* errors in one short paragraph" of the Fruit Culturist, and the Editor regrets that I should have "detracted from the excellence" of this work, "by making any statements upon subjects of which [I] had no experience." I therefore make a few explanatory remarks in the Cultivator, as it appears evident from the editor's style that he did not expect nor intend any reply to be made in that journal.

The *first* objection is, that I stated that "the Duke of Kent and Early Scarlet are *among* the *best* VERY EARLY" strawberries. He says the former is "quite worthless," and was discarded from his collection twelve or fifteen years ago; and that in the London Horticultural Society's Catalogue it is set down "third size and second quality." It is strange that the editor is not aware that climate often produces a great difference on fruit. Now several of the best judges in Western New-York, consider the Duke of Kent as one of the finest flavored of all strawberries, though it may be otherwise at London and Boston. The Pomological Manual says it is "moderate or medium size," and Downing that it is *valuable* where the earliest fruit is desired. Quality is too often considered to depend on size, by the cultivators of large, insipid, and worthless varieties.

The *second* exception is, I said that Bishop's Orange was of "good quality and of large size," which the editor positively contradicts. If he will turn to Downing's "Fruits and Fruit Trees," he will find that I am fully justified by the terms "*large size*," "*very high flavored*," and "*finest quality*," there applied to Bishop's Orange.

"But the *third* and gross error," continues the editor, "is that Hovey's Seedling is tender! It is evident from this that Mr. Thomas never cultivated the true variety, or he would not have made such a statement, for one of its greatest qualities is its hardiness." As for the true variety,—our plants were obtained from A. J. Downing & Co., of Newburgh, and from Prof. Jackson, of Schenectady;—men of the highest standing as horticulturists. As for its being tender, I know several instances in Western New-York, where many plants of Hovey's Seedling were nearly all destroyed by the frost in winter, while the Early Scarlet and other varieties, planted at the same time alongside, nearly or quite all escaped. Such loss was subsequently prevented by winter protection—proving decisively that Hovey's Seedling is no so hardy as the Early Scarlet or Virginia in some localities in this part of the state.

I have no wish to lessen the popularity or sale of this fine variety. The Fruit Committee of the Mass. Hort. Society tried it twelve years in that climate and neighborhood, before they certified that it is "*one*" of the best; but as it had not been tried so long in other climates, I expressed a caution that it should not be EXCLUSIVELY or *very extensively* cultivated till such proof should be had,—though I admitted that "it is regarded by many who had cultivated it, as the finest of all varieties." Now ought this to give offence to a reasonable man?

J. J. THOMAS.

NEW-YORK STATE AGRICULTURAL SOCIETY.

SHOW AND FAIR TO BE HELD AT AUBURN, SEPT. 15, 16, AND 17, 1846.

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The sixth annual Fair and Show of the State Agricultural Society is approaching, and the interest which is manifested shows that our society has lost none of the confidence of the agriculturists of the state. The previous exhibitions have been attended by immense gatherings from different parts of our own state, as well as large numbers from other states in the Union.

The location of the Fair at Auburn, being near the centre of the state, will undoubtedly secure a larger attendance than at any previous Fair of the Society.

The arrangements, it is believed, will be such as to meet the expectations of the public, and the citizens of Auburn are making preparations that will insure suitable accommodations for all who may be in attendance.

The list of premiums of the Society embraces a very great variety of articles—and are so extended as to secure a very spirited competition.

In the appointment of the judges, the officers have selected such names as will secure the confidence of the public, in the awards that may be made.

We would urge upon the friends of agriculture throughout the state to make vigorous efforts to bring out our citizens at the approaching Fair. Every year we have added to the list of our friends, from those who have attended our exhibitions, and we desire still to add to their numbers until every farmer in the state as well as every other citizen, shall take a deep interest in our society, which is identified with the permanent prosperity of the state.

Arrangements will be made for the ladies, that will secure a tasteful display of the articles they may exhibit—and it is hoped that in this department we shall witness a display excelling that at any former meeting of the Society.

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REGULATIONS FOR THE FAIR.

All members of the society, and all who may become members at the time of the Fair, by the payment of $1.00, will be furnished with badges which will admit the person and his wife and children under 21 years of age, to the exhibition at all times during the Fair. Tickets to admit a single person, 12½ cents.

Members will be allowed to enter in carriages with their families, but no hacks or other public conveyances will be permitted to enter except when the inmates are members of the society, without paying a dollar for each entrance, and the inmates, if not members, to furnish themselves with tickets.

At a meeting of the Executive Committee of the N. Y. State Agricultural Society, held at the American Hotel in Auburn, on Thursday, the 14th of May, 1846, the following members were present, viz: J. M. Sherwood, President; E. P. Prentice, H. S. Randall, J. R. Speed, L. F. Allen, Vice-Presidents; J. B. Nott, Corresponding Secretary; Hon. A. Conkling, Dr. John Miller, and Ambrose Stevens; assisted by the Presidents of the Onondaga and Cayuga Co. Agricultural Societies, and other eminent agriculturists, the following committees were appointed, viz:

Committee of Arrangements, and for selecting the Show Ground, and preparing it for the coming Exhibition.—J. M. Sherwood, J. H. Chedell, C. C. Dennis, Auburn; Wm. Fuller, Skaneateles; H. S. Randall, Cortland Village; J. B. Nott, Albany; S. M. Brown, Elbridge; A. Thompson, Aurora.

Committee for Reception of Strangers.—E. T. Throop. Willow Brook; A. Conkling, Melrose; W. H. Seward, Chris. Morgan, E. A. Worden, T. Y. How, Jr., S. A. Goodwin, Auburn.

1ST CLASS—*Durham Cattle.*—Gov. Allen Trimble, Ohio; Henry Parsons, Ancaster, C. W.; L. Chandler Ball, Hosack.

2D, 3D, AND 4TH CLASSES—*Hereford, Devon, and Ayrshire Cattle.*—Elias Phinney, Lexington, Mass.; Lemuel Hulburt, Winchester, Conn.; Edward Cox, Black-Rock.

5TH CLASS—*Crosses of Native and Improved Cattle.*—Ira Hitchcock, Vernon; Lewis G. Morris, Morrisiana; John Randall, Norwich.

6TH CLASS—*Native Cattle.*—W. Garbutt, Wheatland; Thomas Hilhouse, Albany; Samuel Stevens, Preble, Cortland county.

Working Oxen.—Sanford Howard, Albany; Wm. Fuller, Skaneateles; John Ayrault, Perrinton.

Steers—Gideon Ramsdell, Perrinton; Francis Hibbard, Cortland Village; Hiram Clift, Marcellus.

Fat Cattle—John Holcomb, Wilmington, Del.; Thomas Kirkpatrick, Albany; A. L. Freeman, Jordan.

Fat Sheep.—E. W. Cady, Dryden, Tompkins Co.; Wm. Osborn, Auburn; —— Hayden, Syracuse.

Stallions of all work and draught, and Mares.—Adam Ferguson, Watertown, C. W.; Elbert Jones, Oyster Bay; Henry K. Morrell, Caroline Co.

Blood Stallions and Mares.—James Bathgate Fordham; D. D. Campbell, Schenectady; Gen. Daniel Jones, Cold Spring, Queens Co.

Best Matched and Single Horses.—Edward Long, Cambridge; Wm. A. Dutcher, Penn Yan; W. S. Davis, King's Ferry.

Long Wooled Sheep.—Philip Reybold, Wilmington, Delaware; Samuel Cheever, Stillwater; Augustus Rayner, Clarence, Erie Co.

Middle Wool.—William Howitt, Guelph, C. W.; Paoli Lathrop, South Hadley Falls; Benj. Enos, De Ruyter.

Merino Sheep and their Grades—Robert R. Reed, Washington, Pa.; Edward A. Le Roy, New-York; N. B. Smith, Woodbury, Ct.; Samuel Lawrence, Lowell, Mass.; S. Newton Dexter, Oriskany.

Saxon Sheep.—Adam Hildebrand Massilon, Ohio Daniel Rogers, Hosack Corners; Wm. McKee, Salem, Washington Co.; John A. Tainter, Hartford, Ct.; Homer Blanchard, Kinderhook.

Swine.—G. V. Sackett, Seneca Falls; P. N. Rust, Syracuse; E. L. B. Curtiss, Danby, Tompkins Co.

Poultry.—L. B. Langworthy, Rochester; Thomas Hollis, Gilbertsville; Edward Mesier, Fishkill.

Plows.—C. C. Dennis, Auburn; Enoch Marks, Fairmount; S. N. Wright, Vernon.

Harrows, Wagons, &c.—Samuel Greenleaf, Canandaigua; E P. Beck, Sheldon, Wyoming Co.; Israel Boies, Homer.

Corn and Cob Crusher.—Geo. Geddes, Fairmount; Kingsley Sanford, Volney, Oswego Co.; Teunis Bergen, Brooklyn.

Plowing Match.—John Johnston, Geneva; John Finch. Astoria; David Matthews, Truxton; Henry Brewer, Enfield; Paris Barber, Homer.

Butter.—Z. Barton Stout, Allen's Hill; Andrew Dickson, Cortlandville; Aaron Petrie, Little Falls.

Cheese.—Hon. Wm. C. Crain, Warren, Herkimer county; Lewis Eaton, Black Rock: Elijah Morse, Eaton.

Maple and Corn Stalk Sugar.—Otto F. Marshall, Wheeler, Steuben Co.; Robert Hadfield Sheldon, Wyoming Co.; Wm. Blossom, Canandaigua.

Silk.—Joel F. Belcher, Richford, Tioga Co.; Charles Pardoe, Skaneateles; Edward Morgan, Aurora.

Domestic Manufactures.—Roswell Randall, Cortlandville; Curtis Moses, Marcellus; Moses D. Burnett Syracuse.

Fruit.—John A. King, Jamaica, L. I.; W. L. De Witt, Ithaca: A. H. Underhill, New-York.

Flowers.—Herman Wendell, Albany; Wm. N. Randall, Cortlandville; —— Tracy, Syracuse.

Miscellaneous Articles not enumerated or specified.—R. L. Allen, Buffalo; J. T. Cooper, Albany; Wm. Jackson, Syracuse.

Vegetables.—L. A. Morrell, Lake Ridge; Geo. J. Pumpelly, Owego; Henry Morgan, Aurora.

Stoves and other Manufactures of Iron.—C. N. Bement, Albany; Samuel T. Pratt, Buffalo; Franklin Manning, Syracuse.

Paintings and other Drawings.—Francis Rotch, Butternutts; —— Walker, Utica; Gen. John A. Granger, Canandaigua.

Ornamental, Shell, Needle, and Wax Work.—Mrs. B. D. Coe, Buffalo; Mrs. Hanson Cox, Auburn; Mrs. Alvah Worden, Canandaigua; Mrs. Wetmore, Utica; Mrs. W. W. Watson, Geneva.

Unenumerated Implements, and other articles.—J. J. Viele, Troy; J. B. Duane, Schenectady; Stephen B. Cushing, Ithaca.

Committee to negotiate with R. R. Companies for the transportation of Stock, Implements, Passengers, &c., to and from the Show.—E. P. Prentice, Albany; Geo. Vail, Troy; T. S. Faxton, Utica; M. D. Burnett, Syracuse; C. P. Wood, Auburn; L. B. Langworthy, Rochester; L. F. Allen, Buffalo.

For the Reception of Stock, &c., &c.—Ira Hopkins, Esq., Maj. J. B. Dill, Wm. Howard, Esq.

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☞ We learn by the *Tocsin*, that a meeting was held at Auburn, on the 27th of June, for the purpose of devising a plan for conducting the coming Fair. For this purpose a committee was chosen to confer with the Executive Committee of the Society. Committees were also chosen for the purposes of collecting subscriptions and paying bills, erecting buildings for the Fair, providing water and forage for the use of visitors and stock during the days of the exhibition, selecting suitable grounds for the plowing match, to provide lodgings and accommodations for strangers during the Fair, to assist in the decorations of Floral Hall, and other buildings, &c , &c. A determined resolution seems to be manifested by the citizens of Auburn and vicinity, to do their utmost to render the exhibition creditable in all respects to the state, to the Society, and to themselves.

HORSES *vs.* OXEN IN AGRICULTURE.

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Mr. Tucker—In reading Skinner's Essay on the Ox, in Clater's and Youatt's Cattle Doctor, (which by the way, I would recommend to every farmer as almost indispensable,) I supposed that he gave the ox too much preference over the horse, in regard to economy and usefulness as a beast of burden; and to satisfy myself of the fact, I commenced, one year ago last April, to keep an exact account of the work done, and the amount of food given to one pair of horses, and one yoke of oxen, on a farm of about one hundred acres of tillable land, setting down every Saturday night, the number of miles travelled, the number of days worked, and the amount and kind of food consumed during the week. The following is the result:

The horses travelled 667 miles double; 2,151 miles single; worked on the farm 59¼ days double, 36½ days single. Now allowing 40 miles travel to be a day's work for a team, it would make 121 days the whole amount peformed by one pair of horses in one year, which, at $1.75 a day, would amount to $211. They were fed during that time, 105 bushels of oats, which at 50 cents per bushel, amounts to $42; 47 bushels of corn, at 70 cents, $33; 5 months pasture, at $3 per month, $15; 2 months hay, at $4 a month, $8; 3 months on cut straw, worth about $5; expenses of shoeing, $8; wear of wagon and harnesss, $10; decrease in value of horses, $20; making in all, $141; which deducted from $211, leaves a nett profit of $70

The oxen, in that time, did 100¼ days' work, which, at $1.25 a day, amounts to $125.62; were fed 12 bushels of corn, which, at 70 cents, is $8.40; 6 months' pasture, at $2.50 a month, $15.00; 3 months' hay, at $3.50 a month, $10.50; 3 months straw, at $2.50 a month, $7.50; wear of cart, $3.00; making in all $44.40; leaves a nett profit of $81.22; making a balance of $11.12 in favor of the oxen.

But Mr. Skinner says a yoke of oxen will do as much work in a day as a pair of horses; if he is correct, then the balance in favor of oxen would be $61. But such cattle, I think, are very scarce—at least I have found them so.

I last year commenced raising carrots for stock, and although some of my neighbors laughed at me for farming after the Cultivator, as they called it, and I cannot boast of the crops of Mr. Risley, of Chatauque, yet I got at the rate of 600 bushels to the acre, and am satisfied it is more profitable than raising potatoes, could we get a good crop of the latter, which is very uncertain; and this year I have sowed twice as much as I did last year, and am confident I shall get one-third heavier crop, as I did not sow them last year until the last of May, which I think was too late; it was also a very dry season. I raised last year on one-fourth of an acre, 150 bushels, which at 15 cents a bushel, amounts to 22.50. Whole time spent in plowing, sowing, seeding, and digging, 18¼ days, every hour told, which, at 75 cents a day, is $13.87. Cost of seed, $1.50, making in all, $15.37, and leaving a nett profit of $7.12, or at the rate of $28.50 per acre. Herbert Van Volkenburgh.

Malden Bridge, Columbia Co., June 24, 1846.

WINTER AND SUMMER WHEAT—A NEW VARIETY.

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Mr. Tucker—Addison county in former years was quite noted for its productions of winter wheat, as many of the oldest "Trojans" can testify, who received our grain in exchange for cash and goods. For many years we have cultivated but little of any variety. The wheat fly annoyed us so much we were obliged to abandon it, and look to the west for our bread.

Our success has been quite flattering for two or three years. I have heard it reported by those well informed, that we now have more wheat on the ground than was ever sown any one previous year. It never looked more promising for a bountiful crop than at present. Thousands of bushels of our surplus must seek a market abroad.

The Black-Sea Wheat,—a summer variety—is now cultivated here, on account of the general success which we have had in growing it on all kinds of soil, and through a variety of seasons. It produces abundantly, and is insured against the rust. The fly troubles it less.

In February, 1845, I put one peck of this wheat to soak, and as soon as it began to germinate, mixed it with a loam soil, put it into a keg, and exposed it to the weather, where it soon froze, and remained in that state till the last day of March; then sown on muck land, which had thawed to the depth of two inches. The same night the ground froze hard, and it thawed and froze once more before the spring opened. Three-fourths of the grain died, in consequence, as I think, of the grain being too much grown at the time of sowing. It grew wonderfully, kept eight inches ahead of the spring crop sowed in May, and stood six inches higher through the season than the Black-Sea beside it. The heads were uncommmonly long, of a deep red and darker color than the summer wheat. The heads were also longer in the head and more stiff. I harvested four bushels; the berry was evidently larger than the original grain, though not as plump.

In November last, the 13th day, we sowed a pail full of this wheat on loam land, which came up well. It stood about two inches high when the ground froze, and remained covered with snow during the winter. It came forward finely this season, is now headed out, and has every appearance of a large yield. I think it safe to call it the "Black-Sea *winter wheat.*" If it retains the distinguishing properties of the summer variety, it must be a valuable acquisition to our country.

For two years I have cultivated the "Improved White-Flint," or "Harmon wheat," which I obtained from Gen. Harmon, of Wheatland, N. Y. The berry is very even in size, the best and handsomest wheat I ever saw. On less than four acres of sandy loam we sowed about 5¼ bushels, September 8th, 1844. The land is not what we call "wheat land," in this section; not very strong soil, yet I was happily disappointed in harvesting 113 bushels from the piece of the best wheat that I have seen raised here for the last 15 years. The millers pronounce it such.

The heads are a little bearded, white, rather short, but extremely well filled. The straw is very stiff, of good proportion, bearing but few leaves; it is quite small near the head, hard, and not inclined to lodge; the berry is of good size, very white and solid, which produces but little bran. One very great advantage in this variety, as well as in the Black Sea, is, it does not shell in gathering, though quite ripe. I have now the second and more promising crop growing on stronger land. This wheat is so well known that it needs no praise. Mr. Harmon informed me, last winter, that he sold over 1200 bushels for seed last fall, of this kind of wheat. Sales more extensively in his own region, but had received many orders from the south, middle, and western states, as well as New-England and the Canadas.

S. W. JEWETT.

Weybridge, Vt., June 12, 1846.

PRINCIPLES OF BREEDING.

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"THE offspring of some animals is very unlike themselves; it is, therefore, a good precaution to try the young males with a few females, the qualities of whose produce has been already ascertained; by this means we shall know the sort of stock they get, and the description of females to which they are best adapted."—[*Sebright's Essay on the Art of Improving the Breeds of Domestic Animals*."]

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In various races, animals are now and then produced which are the means of effecting extraordinary improvements. Some individuals possess a remarkable and inexplicable power of transmitting their good qualities, or of begetting stock superior to themselves. It is true that what are called well-bred animals usually transmit their qualities with greater certainty than others; and in selecting breeding stock which has not been proved, due regard should of course be had to blood and pedigree. But the faculty alluded to is not always possessed in proportion to the degree in which any particular blood is inherited, for animals of exactly the same blood frequently beget progeny of very different qualities. In swine, for instance, it is not uncommon for the offspring of boars which were of the same litter, to vary much in shape and disposition to fatten. It is so with sheep; of rams that are twins, or those which are the produce of the same buck and ewe, one frequently proves far superior as a stock-getter to the others. The progeny of stallions of the same blood are sometimes quite various. It is not very rare that one male among several produced by the same parents, becomes noted for the value of his stock, though the remainder of the family acquire no particular reputation in this respect. Perhaps no very satisfactory reason can be given, why the progeny and descendants of the horse Messenger have proved so much more valuable for business purposes than most other blood horses in this country. Neither can the superior qualities which have distinguished the descendants of the "old Justin Morgan horse," (the ancestor of the "Morgan" stock,) be fully accounted for by any rules with which we are acquainted.

These remarks are also equally applicable to cattle. In the variety so widely known as improved Short Horns, great improvement has been attribtued to the bull Hubback, whose qualities, as well as those of his progeny, are generally acknowledged to have been much superior to what the Short-Horns generally were before their time. And we may properly mention in this connection, two bulls, descendants of Hubback, viz., Favorite and Comet—the former the sire of the latter. Although they were nearly similar in blood, Favorite was much the most celebrated as a valuable stock-getter, notwithstanding Comet brought at public auction the enormous sum of one thousand guineas. A noted English breeder, in speaking of these bulls, says—"Comet was never the father of as good an one as himself; it was otherwise with his sire. Favorite stamped all his offspring as *superior* to himself; perhaps no bull ever begat so many good bulls and cows."

Of several examples of this kind which have occurred within our own observation, we cannot omit the mention of one in particular which appeared to us quite striking.

A few months ago, while examining the stock of Mr. HORATIO SARGEANT, of Springfield, Mass., our attention was specially attracted by several animals in the herd, which, besides their fine forms and silky coats, were remarkable for their great resemblance to each other—exhibiting an uniformity in shape and general qualities seldom witnessed. On inquiry, we were informed by Mr. SARGEANT that these animals sprung from a bull called Red Comet, which he had formerly owned. He observed that he was the most remarkable animal as a stock-getter he had ever known—that all his progeny were most strikingly marked with his own good points, and that they proved excellent for all purposes. These remarks stimulated us to learn the full history of the animal. Mr. S. informed us that the bull was bred by HENRY WATSON, Esq., of East Windsor Ct., but could not state particulars in regard to his blood. Mr. S. purchased him in Granville, Mass., where he had been kept several years. As the stock which he had begotten while at that place, grew up and were proved, their superiority for the dairy and other purposes became so obvious, that one of his former owners was induced to re-purchase him, and he was therefore, though then at an advanced age, taken back to Granville, where the farmers gladly availed themselves of his services for several years.

Shortly after our interview with Mr. SARGEANT we wrote to H. WATSON, ESQ., for additional facts in regard to the animal which had been the cause of so much improvement, and from his reply we make the following extracts.

"You ask a history, &c., of the bull bred by me, that for a time was in the hands of Mr. HORATIO SARGEANT. The pedigree of that animal is as follows. Red Comet, (1591,) dark red, calved 26th June, 1827; got by Wye Comet, dam Flora, bred by me, by imported bull Holderness, alias Fortunatus; g. d., Belle bred by me, by Young Denton, (963;), gr. g. d., Crowfoot, a native red cow.

"I sold this bull to WARD WOODBRIDGE, Esq., and he let him one year to Gen. PARSONS, of Granville, Mass., and the next year sold him to Gen. PARSONS, who kept him for three or four years, and sold him to HORATIO SARGEANT, of Springfield, Mass. Mr. SARGEANT kept him three or four years, when GEN. PARSONS bought him back, and kept him one or two years. He then sold him, and he went to Woodstock, in this state, where, I believe, he died. After being used two years while at Woodstock, his owner came to see me and ascertain his pedigree. The bull was then twelve years old, and had been put that year to over 100 cows, at $3 each. The stock of his getting, while at Granville, all turned out fine cows for milk and excellent steers for the yoke and shambles, and that was what induced Gen. PARSONS to get him back. While at Springfield he got more good milkers and fine steers than any bull that ever stood in that vicinity. I have seen a great many animals of his get, and they were uniformly superior. He was unquestionably used to more native and cross-bred cows than any bull ever kept in New-England. His descendants from such cows were better than those of his sire, Wye Comet. Abel Chapin, Esq., bred and fed three or four very large and fine steers of his get. One in particular, though not as large as two others he had, was sold to Mr. SARGEANT, and slaughtered in Springfield before he was six years old.

His live weight was, ... 2,627 lbs.
Dead weight, quarters, hide and tallow,. 2,023 "

Loss,.............................. 604 "

Or about 23 per cent. I did consider this steer the best animal of the kind I ever saw, and the nearest in every point to perfection."

From the pedigree of Red Comet, as given by Mr. WATSON, it appears that he was one-half of the blood of Wye Comet, one-fourth of the blood of Fortunatus or Holderness, one-eighth of the blood of Denton, (Young Denton of the Herd-Book,) and one-eighth common or "native ' blood. From what we have seen of the stock of thi bull, and from all the information received, we have reason to believe that he was an animal of uncommon usefulness, and that the above account does him and his stock no more than simple justice.

Our readers will now, perhaps, be able to understand why we have placed the extract from SEBRIGHT as a *text* at the head of this article. The design is to enforce the idea therein contained, that male animals of good promise should be fairly tried and the character of their produce ascertained, before they are either extensively used or rejected. Could this be done, it would prevent great losses from the use of poor stock-getters, and might in many cases be the means of saving and making generally useful, animals whose good qualities might not otherwise be known.

SOWING WHEAT.

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MR. TUCKER—Few persons are aware how very much the yield of the wheat crop depends upon the manner upon which the seed is deposited in the soil. I risk nothing in saying that fully one-third could be added with certainty to every farmer's crop by due attention to this point. The proper depth at which seeds should be deposited in the soil, has engaged the attention of the most eminent agriculturists and scientific men of Europe, and its vast importance acknowledged by them.

Baron Voght, of Flotbeck, near Hamburg, has most ably discussed this subject in the British Farmer's Magazine, vol. 4; and Mr. Patrick Sheriff, of Mungo's Wells, near Haddington, in Scotland, has written in the early numbers of the Quarterly Journal of Agriculture, some articles so practically convincing and so much to the point, that I think you could not do your readers a greater favor or service than to give them to them entire, if the work I allude so is within your reach. If seeds be placed by accident or design at such a depth in the earth, as to be out of the influence of the air, and though they may be surrounded by the requisite degrees of heat and moisture, they will nevertheless remain dormant.

We have many instances of the truth of this in every day practice, and of the imperishable properties of some kinds of seeds when excluded from the influence of the air. If seeds are dropped on the surface of the ground, they will remain uninjured and unaltered so long as the air is perfectly dry; but in moist air germination commences, and the point of the root will quickly protrude and find its way into the soil. This is the ordinary process of nature; but experience has taught us, that though nature distributes grain and other seeds generally on the surface of the spot where produced, yet there is a proper depth at which all seeds should be deposited, and which is specially suitable. This depth is obviously that which, while it yields the necessary degrees of heat, moisture, and darkness, is yet within the requisite influence of the air. The drilling system is approved, not only from its equal distribution of the seed, but because by it, seeds are also laid in at an equal depth; this last circumstance is regarded as one of the principal advantages of the machine. Now, Baron Voght has endeavored to show that seeds may be deposited too deep even by the drill, and in all cases when seed is sown before harrowing, much of it will be laid deeper than it should be, and consequently lost. Of this there can be no doubt. Every one acquainted with sowing must allow that seed may be buried too deep; and every body acquainted with the structure of culmiferous plants and their manner of growth, must be convinced that if seeds are just covered so as to be sufficiently shaded from the sun's rays, it is enough. Mr. Sheriff clearly proves, that all seeds with what he calls "coronal roots," no matter at what depth the seed is deposited and germinates, that so soon as it reaches within one-half an inch of the surface of the earth it will then put forth its coronal roots, and from them make a new start.. There is no fact connected with agriculture more easy of proof than this; any farmer may take a flower-pot filled with earth, and in it deposit three or four grains of wheat at different depths, from an inch downwards, and satisfy himself of this fact, as well as the weakly and sickly state of all that are sowed below the depth of one inch, as compared with the one sown at that, the proper depth.

Explanatory of these assertions, Baron Voght has appended to his paper figures of five different kinds of grain in five different states of growth, caused by the different depths at which they had been deposited in the earth. I annex two of these, as sufficient to illustrate my subject.

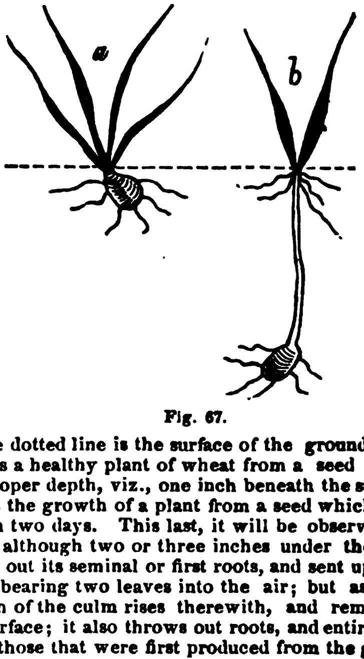

Fig. 67.

The dotted line is the surface of the ground; *a*, represents a healthy plant of wheat from a seed laid in at the proper depth, viz., one inch beneath the surface; *b*, shows the growth of a plant from a seed which has been laid in two days. This last, it will be observed, vegetated, although two or three inches under the surface, threw out its seminal or first roots, and sent up its first shoot bearing two leaves into the air; but as the first branch of the culm rises therewith, and remains near the surface; it also throws out roots, and entirely supersedes those that were first produced from the grain.

To every practical and observant farmer it must be evident that this unnecessary waste of vegetable power must be both hurtful and unnatural; besides, the young plant must be more liable to accidents from the changes of the weather, slugs, and insects, during the ascent of the first shoot, and before the principal root is formed, than if started from its natural position at once.

To guard against over-deep sowing, or burying the seed altogether so as not to germinate at all, it is evident that no seed should be sown until the ground is *first harrowed*, and made level, and when sown, a light harrow passed over the field, will cover the seed sufficiently to insure a safe and good crop. Of these facts experience had long since convinced me, but if any doubt had remained in my mind about it, the crop of wheat grown by Mr. Wm. L. Thompson, within a few miles of this city the past season, would have entirely removed them. He had a 20 acre field of corn, which he had cut up and taken away. Finding the ground very mellow, he thought he would try the experiment of sowing his wheat on it, two bushels to the acre, without plowing, and merely harrow it in, which he did. His hands, and all his neighbors tried to dissuade him from it, saying it was a waste of so much seed and labor, but much to their astonishment, in the spring, there was no so luxuriant crop as this in the neighborhood; and I have Mr. Thompson's assurance, that he delivered to the mill, of good merchantable wheat, a little over 25 bushels to the acre, being 5 bushels to the acre more than he had ever grown off his land before. So satisfied is he with the result, that he is determined never to sow his wheat again until he has first harrowed and leveled his land, so as to preclude the possibility of too deeply burying any portion of the seed, which is inevitable if sown on plowed and unharrowed land, or which is still worse, if sown and plowed in as is often the case.

If these remarks will only draw the attention of wheat growers to this subject, I am satisfied that a little reflection and observation will convince them, that by properly preparing their land to receive the seed, and depositing it at a proper depth in the soil, the wheat crop of the United States may be increased fully one-third, without any additional labor or expense.

A FARMER.

Louisville, Kentucky, 1846

AGRICULTURE AS AN OCCUPATION.

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L. TUCKER, ESQ.—I have no apologies to offer for asking a place in your very valuable journal for a few thoughts upon several subjects connected with agriculture. It is enough that you have requested me to do so, and that, after a delay which may have led you to conclude I had no intention of complying with your request, I have found time to commence what I design as a series of communications, which, should they prove interesting to a portion of your numerous readers, I shall be happy to forward, as time and circumstances may allow. I do not intend to write to please my own fancy; nor merely to amuse those who may read, but if possible to benefit. If I can aid the wavering in the choice of an honorable business, or encourage the laborer in his toils, or give any valuable hints to the inexperienced, I shall feel richly remunerated for my efforts. The first subject which I wish to present, is the choice of an employment.

A sentiment has prevailed, and I fear yet prevails to an alarming extent, that the practical farmer occupies a place in society a grade lower than the professional man, the merchant, or than many other laborers. Many of our youth have imbibed this sentiment, and have been encouraged in it by the fond but injudicious parent. Thus, not a few who might otherwise have been useful members of society, have been thrown upon the world, mere pests to the community. I have certainly no antipathies to the learned professions, the mercantile business, or mechanical employments. These are all necessary and important; but I insist that agriculture is neither less important, or less honorable, or less useful.

The difficulty is not so much in the several *kinds* of business, as in the fact, that an *undue proportion* of our fellow citizens are engaged in the former, to the neglect of the latter; and more than all, that the sentiment which I have suggested, prevents multitudes from engaging in either.

From my own observation, in a life of more than 45 years, and looking back and following the history of my early associates, and from a somewhat extensive acquaintance with the world, I am fully of the opinion that *that* sentiment is one of the most fruitful sources of idleness and crime, of any that can be named. And yet, what multitudes of young men and guardians act, or seem to act, under its influence.

I knew a man in my early boyhood, who has a *profession*, but very little else, (except a numerous family) who was often heard to say, that *his* sons should never be farmers, let what would come. Those sons are now vagabonds, except one, who has already come to an untimely end. His daughters married *gentlemen*, and are both living in abject poverty. This is only one among the multitude of cases which might be mentioned. Still men will pursue the same path.

I know a farmer with two sons—smart, active lads, enjoying good health, who, not long since, *rented* his farm; that he and his boys might live easier. I was inclined to say to that father, take care, sir, that you train not those fine young fellows to idleness, dissipation, and vice.

God made man an agriculturist, and while in a state of innocence, his first business was to till the ground. And in every age of the world, some of the greatest and the best of men have been farmers. Job and Abraham were farmers; Washington and Jackson were farmers —as also a multitude of worthy names and noble spirits, who, like them, have blessed the world with examples of greatness and honorable deeds. And I rejoice to know that many in our own time, of highly cultivated intellect, and enlarged views, and worldly competence, are proud to be ranked among practical farmers.

Far better had it been for the world had the number been tenfold greater. Far better were it for the present generation, if in the choice of an employment, parents and their sons would view the subject as these have done; and let those sons be directed in their choice to the same wise results. Thus, much of the idleness and crime which are exerting such a fearful influence upon us, would never have existed. Many of the *temptations* to vice would have been avoided.

I know a father, engaged in a profession, who has an only son, for whose interest he has ever felt the deepest solicitude. When that son was 16, like many lads of his age, he manifested a strong desire to engage as a clerk in a store. The father felt that agriculture was an *equally* honorable business—much safer, and more free from temptation; yet he did not wish absolutely to *compel* to a course averse to his own choice. He therefore engaged a place for him with a merchant of his acquaintance to be occupied in a few months, on condition that the son should still persist in his determination. He then took the son alone, and informed him that he had procured such place; at the same time pointing out in a kind manner, the advantages and disadvantages of the mercantile business, and of agriculture. He told him that he was now of an age that he must choose for himself. That whichever way he should now decide, he would be aided as much as practicable—that *that* decision must be final—that he might reflect upon the subject one week, and then let his decision be known.

At the close of the week, he decided "to be a farmer," to the joy of his father. From that day onward, he has pursued steadily his course—is now pleasantly situated upon a comfortable farm, and is proud, at home and abroad, to be known as a farmer.

Would it not be wise for many a father and son, to imitate this example? R. A. A.

Galway, Saratoga Co., 1846.

FOOT ROT IN SHEEP.

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SOME interesting facts relative to this formidable and contagious disease have been communicated to us by HUMPHREY HOWLAND, ESQ., of Cayuga county, whose long and extensive experience in the management of sheep entitles his opinions to great weight. He has applied a remedy which, if not totally eradicating the disease, certainly promises to reduce it exceedingly. This remedy is now in use for the second season, during which time, the rot has diminished from thirty per cent. to one per cent., in a very extensive flock, or only one sheep is now lame where thirty were formerly. Other flocks in the neighborhood, to which the remedy has not been applied, are as badly affected as ever.

The remedy consists in mixing flour sulphur with the salt given to the sheep, in a proportion just sufficient to discolor slightly the salt, or about one-twentieth part. They are regularly and constantly fed with this mixture the season through.

The disease being considered as allied to the itch, the sulphur mixed with oil was also applied to the backs of the sheep immediately after shearing, and whatever effect this mixture may have had upon the rot, the grease was found to have increased the weight of wool about a quarter to half a pound per head. The practice of applying oily substances externally to sheep, and the beneficial results, have been elsewhere known, and this experiment further establishes the advantage.

The cost of these materials for large flocks, may be lessened by purchasing in quantity in New-York city. Flour sulphur is often retailed at twelve and a half cents per pound; in New-York it costs three dollars per hundred, and fifty cents additional, as freight, brings it to only three and a half cents per pound. Lard and lamp oil are costly as external applications; but train oil, or oil of the true whale, is only about 32 cents per gallon in New-York, if bought by the barrel, or $10 per barrel; this would be enough for 2000 head of sheep, or half a cent per head;—the sulphur mixed, and the labor of application would be about 2 cents per head.

It is of great importance not to draw hasty conclusions; but the above remedy, it is believed, if not totally removing the rot, which longer trial may accomplish, will certainly be of the highest benefit in lessening its formidable nature.

THE STRAWBERRY.

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MR. TUCKER—I am pleased with your strong common sense notice of my letter on the character of the strawberry plant, though like many others, your mind is still unsettled on the subject. My mind is relieved from all anxiety on the subject, for when the attention of such men as Professor Kirtland, Buist, Wilder, and Jackson, have been drawn to it, and their doubts removed, even the most skeptical of our scientific European gardeners and botanists must deem the subject worthy their notice. For 26 years I have endeavored to draw the attention of the latter to it in vain. I was listened to with patience till candor compelled me to admit that my attention was first drawn to the subject by the opinion of an ignorant market woman. From that moment I was compelled to be silent. But the day is as near at hand as the millerite day of judgment, when these learned and scientific men will be compelled to admit that the old woman was a better botanist than Linnæus, so far as the character of the strawberry plant is concerned. With our ignorant market gardeners, I had no difficulty in making converts. They knew Mrs. Abigust could raise larger and finer fruit than they did on the same space of ground, and five times the quantity. To be certain of having the same kinds, they even stole her plants. But in a single year, they became barren also. I pointed out to them the difference between the staminate and pistillate blossoms, and they saw that the former did not bear a single fruit, (for the staminates we cultivated at that period were entirely barren,) whilst the former produced a perfect berry to each blossom. They required no other evidence, not being botanists, and soon compelled Mrs. A. to quit the business.

The subject has been for two years before a committee of botanists and market-gardeners, appointed by our Horticultural Society, and their report will soon be made. It is also before the Horticultural Society of Boston, and we shall soon know their opinion on the subject; and their attention will be especially directed to the justly celebrated seedling of Mr. Hovey, and its character will be settled.

I cannot be surprised at the doubts of others, when Mr. Hovey is entirely ignorant of the character of his own seedling, after cultivating it extensively for 12 years, and his attention having been drawn to the subject some years since. You say truly, my reply to Mr. Downing "does not demolish, but overleaps his assertion." With my friend Downing, I have less patience than with others; for from his just celebrity as a horticulturist, I expect him not to be *nearly, but exactly right*. When he has for a single season, devoted as much attention to this plant as I have done each year for 20 years, he will freely sustain my views. Ten acres of Hovey's seedling, if entirely separated from all others, will not in ten years produce a full-sized, perfect fruit. For fifteen years we cultivated the Hudson only, and for that period I kept a bed of them separated from all others, to make new plantations from, and during that period they did not produce a single fruit.

> "Facts are chiels that winna ding,
> And downa be disputed."

And even our European gardeners admit that the principles I contend for are true in this climate, but still contend that in Europe, all species and varieties are perfect in both organs, and uniform bearers, and no difference in the size and appearance of the blossom, which they now admit to exist with us. But they contend that our plants, if returned to Europe, would recover from their defective organization, and become perfect in both organs. I marvel if the change would take place as *suddenly as it does with us*. Fifteen years since, I imported eight or ten varieties of strawberry plants from England, and they blossomed within *two weeks* after their arrival, and wonderful to tell, all but one variety were defective in the female organs, and after 2 or 3 years' trial, were deemed of no value except to impregnate the pistillate variety, which I still have, and which I feel bound in truth to say, has retained her purity and chastity of character, and would never bear fruit if left unmolested.

In two things we can beat the mighty East. In the abundance of our strawberries, and in the cultivation of the Cactus. The Night-blooming Cereus is with me now in its glory. I have had more or less blossoms on several plants in tubs and pots, for the last two weeks. On one plant I had 69 buds and blossoms, and 38 of them in full bloom on Saturday evening last, besides numerous blossoms on other plants.

Cincinnati, June 17, 1846. N. LONGWORTH.

THE QUEEN BEE.

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MR. EDITOR—Dr. Bevan, and other celebrated writers on the nature and habits of bees, say, that second and third swarms have very often two or more queens when they leave the old hive, and before they commence operations in their new habitation, there will invariably be a battle, which lasts till all but one are killed; but that an instance never yet occurred where all were destroyed, even if in their pitched battle both were placed in such a position that both would receive a death wound at the same time, nature or instinct would teach them to desist, and avoid a close onset for the purpose of preserving one alive.

A few days since something very singular occurred with my own bees, which goes to disprove this assertion. On the 15th of June, at 1 o'clock P. M., a second swarm came out of one of my hives. I soon had them hived and placed upon the stand close by the old hive. In the afternoon they were very quiet, and none left the hive for forage. The following day being very warm and close, they kept unusually quiet, and I soon perceived that there was something wrong. At 11 o'clock A. M., they all rushed out of the hive with great noise and confusion, and I expected they would soon leave for the woods, but contrary to my expectations, they all returned again to the old hive. I soon, however, discovered the cause of this strange movement. On the bottom-board I found two dead queens, and in all probability, the only two that were with the young swarm. In their contest for the mastery, they probably both inflicted at the same moment a death wound, and as soon as the bees discovered their loss, they again returned to their old habitation. I could discover no trace of combs in the new hive, and hence I have reason to believe that the bees were almost twenty-four hours silent spectators of the furious and deadly contest.

Catawissa, Pa., June 1846. WILLIAM J. EYER.

OUR ENGRAVING.

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THE well executed and life-like engraving which accompanies this number of the Cultivator, represents a pair of three years old steers, bred and reared by JAMES S. WADSWORTH, Esq. of Geneseo, to which one of the premiums was awarded at the show of the New-York State Agricultural Society, at Utica. One of them, we were informed, was a full-blood Durham, and the other three-fourths of that breed. They were very fine steers, exceeding in size and symmetry any other we have ever seen of their age. Their uncommon growth and tendency to fatten, induced their owner to dispose of them for beef at an early age; they were, therefore, with seven other cattle, transported *via* railroad, and sold at Boston, in February last. As the lot passed through this city, we had an opportunity of seeing them, and have no hesitation in declaring that we have never seen them equalled by any similar number. The live weight, (we never learned the dead weight,) of the subjects of our plate, was 3,965 pounds. The lot consisted of ten head, one of which, a remarkably fat ox of six years old, was slaughtered in this city weighing, dressed, 2,061 pounds. There was one cow, (a full blood Durham,) in the lot, and four of them, including the steers whose portraits are here given, were under four years old, yet the aggregate live weight of the ten, was 14,295 pounds

Mr. WADSWORTH and his brother, have been frequent and successful competitors for premiums on stock, particularly working oxen, at the shows of the State Society. Many of our readers will recollect a splendid team of ten yoke of oxen which they exhibited at Poughkeepsie—three yoke of which obtained the first premium offered on that number. Their display at the Utica show was still more attractive. Besides several yoke of steers, they presented a train of ten yoke of working oxen of the finest appearance, which received the first premium offered for that number from any one town. A very superior pair of four-year-olds from this noble team, received the second premium offered for the best single yoke of working oxen.

The vast domain of Mr. WADSWORTH and his family connexion, in the county of Genesee, is devoted largely to grazing. Mr. W.'s home farm consists of thirteen hundred acres, of which he usually mows about six hundred acres, and obtains an average yield of two tons of hay per acre. He kept on this farm last winter 260 head of cattle, and he usually summers from 400 to 500. They are mostly steers, bought of the tenants on other portions of the estate. After having been allowed to run for a season on the rich pastures of the Genesee flats, they are sold off to drovers.

It is proper to say that Mr. WADSWORTH, besides being a spirited competitor for premiums, is a most liberal supporter of agricultural societies, and an earnest patron of agricultural improvement generally. He for two years occupied the post of presiding officer of the New-York State Ag. Society, whose affairs he managed with an efficiency and judicious care alike creditable to himself and beneficial to the association.

THE FARMER'S BANK.

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L. TUCKER, ESQ.—Why may not every farmer be his own banker?

Every farmer *may effectually* be his own banker if he chooses; he has the right, he has the power, he has the means at his own command, and by the exercise of this right, this power, and these means, he can be benefitted far more than by any investment of capital in the general banks now in use.

The bank I allude to is the Farmer's Bank of Manure, the location in his own barn-yard. This is a bank that can never fail, can never be insolvent. He subjects himself to no protests, he lives in no fear of a suspension of payment, he needs no bolts, bars or locks to secure him from the midnight robber, there is no cashier to tell him when he presents himself to this bank for means to carry on his farming operations that a discount is required to grant him a favor, or to tell him his endorser is not good or sufficient. He is not confined to a limited number of days, with a *little grace* beyond it; and when he draws his check he has no fear of being told by Mr. President, Mr. Cashier, or Mr. Teller, that there is not any funds placed to his credit.

Then let every farmer, if he has not done so already, securely arrange his barn-yard in such a manner that none of the deposites can be squandered until he removes them himself.

If the farmer owns *stock* in this bank he suffers no perplexity or anxiety of mind that he may not have a semi-annual or annual dividend declared of less than the lawful interest of his money, but he can rest assured that his dividend will be the real substantials of life to his pocket and family, viz., pork, beef, butter, cheese, money, &c. There are many of the common banks that have the words "Farmer's Bank of" prefixed to the place where they belong, apparently to induce the farmer to believe that they are for his own especial benefit. Beware of them! Do not be drawn into their snare. There is a class of men and business which these banks may perhaps benefit; but the farmers, who may be justly styled the corner stone of our republic, they can never benefit as will their own bank, *the Farmer's Bank of Manure.* A. H. HALLECK.

Westmoreland, N. Y.

AGRICULTURE OF OTSEGO COUNTY, N. Y.

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MR. TUCKER—I have been sojourning awhile in Otsego county, and I thought perhaps I might extract something from my notes that would be interesting to your readers.

Otsego is rather elevated, containing the head waters of the Susquehannah; hilly, but not mountainous, most of the hills being susceptible of cultivation to their summits. The principal articles sent to market are butter, cheese, wool, pork, fat cattle and sheep, oats, barley, and hops; and by the way, this last article is all the rage in some parts of the county just now. But on the whole, the wool-growing and dairying business take the lead; and say what you please of Old England or *Dutchland*, I never ate better butter or cheese than at some of the tables in Otsego.

The farming here is somewhat peculiar; the arable land is divided into meadow and pasture; the meadows receive the manure, and in them a rotation of crops is pursued, and frequently four or five different kinds of grain, besides grass, are to be seen in the same field. When the pastures are supposed to be "rich enough," they are plowed, and a crop or two of grain taken, and then seeded again to grass.

The attention of the traveller is often attracted to the numerous little mills for sawing wood—propelled by water power, and placed on almost every rivulet; they are used for a few days in the spring when the snows are melting and the streams high. The trunks of trees are hauled to the mill, and a man will saw from eight to ten cords in a day, "stove length," and thus save many "hard knocks."

The diversified face of the country gives many beautiful sites for cottages, and in some instances nature has been aided by art, but in the majority of cases you will find nothing to relieve the monotony of that eternal row of maple trees, straight as a Lancaster rifle, and the trees just so many inches apart. Now I have nothing against maple trees "in the abstract," only let them be more *Downingized*, that is, have more of a come-by-chance arrangement. RAMBLER.

Butternutts, 1846.

HEAVY CROPS.—In the fourth report of the Agricultural Commissioner of Massachusetts, instances are given where 105, 110, 113, 115, and 117 bushels of corn have been harvested from one acre; and 400, 484, and 518 bushels of potatoes.

SUCCESSFUL FARMING.

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For judicious and economical management, few farms that we have ever visited will compare with that of A. Van Bergen, Esq., situated about three miles from Coxsackie landing. It consists of 700 acres, lying mostly in a body, about 500 acres being cleared, and the remainder wood-land. The nett proceeds from sales for the last ten years, have been from $2000 to $6000 yearly.

The staple product is hay. About 300 acres are this year in mowing. The average yield is from a ton to a ton and a half per acre. The hay is pressed on the farm, and shipped to New-York. The price obtained per ton in that market, is from $10 to $16.

The mowing-grounds are laid out in large lots, thus obviating the expense and trouble of many inland fences. There are 212 acres in one field. One side of this field, embracing twenty to thirty acres, having the benefit of the wash from the highway, has been in grass for forty successive years, and has yielded annually from one and a half to two tons per acre. But the usual course is to break up the meadows once in four or five years, take a crop of corn and a crop of oats, and then seed down again with timothy and red-top. Top-dressings of manure are sometimes given, in connexion with which the sward is scarified, some grass-seed sown if required, and the surface made smooth with the roller.

The mode practised by Mr. V. B. in making hay is deserving note. The grass is never cut while wet with dew or rain; thus, from its dryness, it does not pack in the swath, but is so light that it admits the air, and dries rapidly without being spread. From the swath the hay is put into small grass-cocks. This is done very expeditiously with large wooden forks—one man being able to accomplish more in this manner than three or four could with rakes. The next day the cocks are turned over for the moisture of the bottoms to dry off, which in good hay-weather is all that is done before taking the hay to the barn. But if there is a prospect of rain, the cocks are carefully doubled and and trimmed. After the bulk of the hay—that is, what was put in cock—has been carried off, the scatterings are collected with a spring-tooth horse-rake, an implement which answers admirably for this purpose, as well as for another, of which we shall speak presently.

This mode of making hay we think a very cheap one, and it seems to answer well in this case. It should be remarked, however. that as Mr. Van Bergen sells his hay, a considerable object is to obtain the greatest *weight* with the least expense; most of the grass, therefore, is not cut till it has reached such a state of ripeness that the curing is effected with much less labor than it could be at an earlier stage.

Land Under Cultivation.—Mr. Van Bergen has this year about 100 acres under the plow, viz: 32 acres in corn and beans, (in alternate rows,) 40 in fallow, with beans in rows ten feet apart, 8 in potatoes, 10 in oats, and the remainder in buckwheat.

The cultivation is admirably conducted; the work is done in the most thorough manner, and with the least possible expenditure of cost. The soil, though of a character commonly called "strong," is not, on the whole, of a nature favorable to crops. A great portion of it is too flat, and it is mostly of a very tenaceous texture, with a cold, compact subsoil, which does not admit of the free descent of water. For these reasons crops are liable to suffer both from the excess and deficiency of water. If there is much rain, the soil is made into mud, and from being thus run together, it bakes so hard when dry that the plants cannot extend their roots.

We mention these disadvantageous circumstances, as they serve to show in a more striking manner, the superior skill and judgment used in cultivation. Against obstacles which really would have induced many farmers to relinquish the idea of obtaining profitable crops. Mr. Van Bergen has persevered, and has received for his well directed labors an abundant recompense of reward." Sixty bushels of corn per acre, and from forty to sixty bushels of oats, have not unfrequently been taken from such land as we have described.

That these crops have been obtained at small comparative cost, will be inferred from the fact that three men, under the direction of Mr. Van Bergen, have done all the hand labor on the farm, from the opening of spring to the 1st of June. The secret of accomplishing so much with so few hands, lies in the performance of much the greatest portion of the work by improved implements drawn by horses. We cannot give at this time a particular description of these implements and the manner in which they are used, but hope to obtain cuts before long, of some which we consider particularly valuable. It may be observed, however, that in cultivating the crops above-mentioned, Mr. V. B. uses no less than three kinds of plows, three kinds of cultivators, and a harrow besides a spring-tooth horse-rake, which is made, in some instances, to do the work of a harrow in an improved style.

In plowing, as well as in all the after-culture, particular regard is paid to adapting the work to the nature and tendencies of the soil. The first object is to obviate the difficulties arising from the water remaining too long on, or near the surface. For this purpose the land is laid partly in beds with open channels so disposed as to facilitate as much as possible the discharge of the water. The land is next thoroughly subsoiled to the depth of fifteen to seventeen inches. In the course of culture, particular attention is paid to keeping the soil open, which is effected by the use of tools which penetrate and loosen to a considerable depth. The thirty acres of corn and beans which we have mentioned, were managed from first to last, entirely without the hand-hoe, and yet we have never seen an example of more clean and perfect cultivation than the field presents. Mr. Van Bergen assures us that a man and a boy will readily tend forty acres of corn, on his system, in a season, and that too in the most thorough manner—not run over so as to have the ground full of "unclean things," as we have too often witnessed on the corn-lands of the west.

The bean crop of which we have spoken, was planted with Lewis' Seed-Planter, an implement with which Mr. Van Bergen is much pleased. It is drawn by a horse, and does the work with great precision and dispatch. Mr. V. B. intends to use it hereafter for planting corn.

Mr. Van Bergen's fallows are managed on the true plan. The object is to clean the land, and this is done most completely. The land is alternately worked with cultivators, or "gang-plows," paring cultivators, and the spring-tooth horse-rake. The cultivators or gang-plows leave the ground in small ridges, a foot apart; the parers, which are narrow plates of steel of lengths varying from one foot to three feet, are made to shave the surface, which levels the ridges and cuts clean all vegetation; the horse-rake, which is made of extra-sized wire to fit it for this purpose, follows after, rakes the ground smooth, collects weeds or grass where there is any, and leaves the ground in the most beautiful condition. These different operations are repeated in the course of the season at various intervals, as may be necessary to keep the soil clean and light. The last operation before sowing winter grain, is to put the land in the small ridges, (as described before) by the gang-plows; on these ridges the grain is sown, and is then harrowed in with the horse-rake, which running length wise the ridges, brings the grain in regular rows, a foot apart.

The gang-plows and the largest sized cultivators, are drawn by two horses. Some of them work a breadth of nine feet at once, and a man and pair of horses will work over from fifteen to twenty acres of fallow land a day, with one of them. Mr. V. B. has lately made one still larger than those we have mentioned, which cuts a space of ten feet in width, and requires three horses to draw it. It is designed partly as a scarifier for grass-grounds, and partly to clean the foul growth from the fallows; and is at the same time so contrived that differently shaped tools may be readily fitted to it, so that at option it is metamorphosed from

ier to a mammoth cultivator, or set of gang-plows.
ay be observed in passing, that Mr. VAN BER-
nakes considerable use of the subsoil plow in
ıg his grass lands. It answers in this case a simi-
pose to the *mole plow*. The implement is passed
h the sward in such places as would be likely to
he most drainage, and a channel is thus made which
y takes the water from the surface of the land, but
:ts it off to natural courses. The plow does not
ver the sward, but only raises it, so that the grass
as well or better immediately over the channels
ther places. These spaces made by the subsoil
emain open for two years, and are of great advan-

IRY BY THE WIRE-WORM.—Mr. VAN BERGEN'S
nave been greatly injured this year by the wire-
His wheat and corn have been almost totally
red; his oats have been considerably cut off, and
is beans have not escaped; and judging from the
rs which on examination we found preying on
oots, their chance of affording a crop must be
ndeed. He has not found any mode of counter-
their ravages.

E STOCK.—Three pair of horses are kept by Mr.
BERGEN, which perform all the team-work on the
ıs well as all other service required by horses.
s of oxen have formerly been kept, in addition to
rses, but this season their use has been discon-

nall stock only is kept. The cows, ten in num-
e mostly Durhams, Ayrshires, and grades of these
. Several of the Durhams were imported. They
dently of a milking family, and show excellent
for the dairy. The Ayrshires are very pretty
-silky haired, clean skinned, small boned, with
indications of first rate dairy-stock. Mr. V. B.
ly fatted calves for the New-York market. He
sold them at from five to ten weeks old, and ob-
for them an average price of $9 per head. He
ıe year 160 calves fatted by himself. The busi-
oved profitable for several years; but competi-
ter awhile, reduced the profits, till it became no
an object.

CLUSION.—Mr. VAN BERGEN'S farming must, on
ole, be considered eminently successful. Many,
any farmers, even with greatly superior advanta-
soil, do not obtain anything like as good crops
average, or realize half as good profits on their
invested in farming. What is the cause of this
? is the question obviously suggested. We an-
t is to be found in the fact that "KNOWLEDGE IS
." A MIND well balanced, well disciplined, and
ıinating, here exerts its energies; and the effect
in the systematic plan on which the various ope-
are based, and in the highly satisfactory pecu-
eturns which are the ultimate results.

......

r having spent several hours in the examination
VAN BERGEN'S farm, we called for a short time
residence of Mr. REED, about a mile from
:ie. We were unfortunate in not finding him at
and therefore took but a hasty stroll about the
es; though we saw sufficient to convince us that
n was a good one, and that it was in many re-
ı beautiful place. The site commands a delight-
w of the river, with fine prospect scenes on either
The buildings are mostly new, well constructed,
ll arranged. The garden, which we went through,
ily laid out, and is a perfect model of neatness—
ngle weed being found in any part of it. We
that there were quite extensive orchards, which
to have been properly managed; and we were
ıt 2,200 bushels of winter apples had been sold
ıe farm in a year.

ING CORN.—A successful farmer effects a saving
rd to one-half by soaking his corn fed to horses
r, in barrels placed in the cellar, where it can-
eze.

MR. TUCKER—Your columns are seldom devoted to the *fine arts*, nevertheless I venture to send you a song, which may not be inappropriate to a corner in your excellent paper. That the farmer has as good reason to sing as any other man, I suppose no one will deny, and if song-singing is admissible, perhaps this will be found as expressive and unexceptionable as any other, howbeit a te-totaller might think it smacked somewhat of hard cider. I believe the song is old, but I have never seen it in print. W.

THE HARVEST HOME.

......

When autumn freely yields
All her golden treasures,
Then those who reap the fields,
Partake of harvest pleasures.
This, lads, is harvest home;
Those who labor daily,
Well know 'tis sweet to come,
And pass the evening gaily.
Then let each heart be light,
Here's no room for sorrow,
Joy holds her court to-night,
Care may come to-morrow.

Now let the lab'rer wipe his brow,
Rest and plenty wait him
Barn, cellar, rick, and mow,
Are fill'd to recreate him.
Scythe, sickle, rake, and hoe,
All are now suspended,
Like trophies in a row,
For future use intended.
Then let each heart be light, &c.

Now gay Pomona's store,
Past exertion blesses,
Rich streams of nectar pour,
Sparkling from her presses.
Full goblets streaming broad,
Crown the farmer's labors,
These real bliss afford,
When shared by friendly neighbors.
Then let each heart be light,
Here's no room for sorrow,
Joy holds her court to-night,
Care may come to-morrow.

MEETING OF WOOL-GROWERS.

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WE learn by the *Lowell Courier*, that a meeting of wool-growers was held in that city on the first of July; and by the following extract, it will be seen that an arrangement has been formed for the purpose of ascertaining the comparative value of different flocks of sheep for the production of wool, among the Saxon and Merino varieties. Important facts will no doubt be elicited by this arrangement, and we trust they will all be duly laid before the public. In regard to the flocks to which merit shall be awarded, it will be specially important and interesting to know, fully, the course which has been pursued in bringing them to a state of excellence; and we hope to be informed how those flocks have been derived, and how, for several generations, they have been bred and managed. We desire this information as furnishing the proper data from which to deduct a correct *system* of breeding and management.

......

At a meeting of wool-growers, holden at the office of the Middlesex Company, in Lowell, Mass., on the first day of July, 1846, representatives from the eight following states being present, viz., Massachusetts, New-Hampshire, Vermont, Connecticut, New-York, Pennsylvania, Virginia, and Ohio. Samuel Lawrence, Esq., of Massachusetts, was called to the chair, and G. Dana, of Ohio, appointed Secretary. After opening the meeting, an important and very interesting discussion took place on the relative properties of the Saxon and Merino sheep, and more especially of their fleeces, in which Mr. Brown, (of the firm of Perkins and Brown, of Akron, Ohio,) as advocate for the excellence of the

Saxon breed, and Mr. Jacob N. Blakeslee, of Connecticut, advocate for the Merino breed, largely and most interestingly participated. These gentlemen, after various, propositions with the aid and approbation of the meeting, came to and agreed upon the following manner of testing, and as far as could be done, settling the question of the relative value of these two important breeds of sheep.

Perkins & Brown, in the presence of Guy Walcott, of Summit county, Ohio, are to select forty lambs, which said Walcott is to see shorn, and is to certify that they were of the flock and bred by said Perkins & Brown, and that they were shorn at or about one year of age, and at the clip of 1847. The said Blakeslee is to select a like number from his flock, which are to be shorn at the same age, in presence of N. B. Smith, of Connecticut, at the clip of 1847, who is to make a like certificate as the one described—which certificates are to accompany the wool of the said lambs to the Middlesex Company, and to be placed in the hands of Samuel Lawrence Esq., who is to be the umpire to decide upon the merits of the two lots; and it is understood that the wool is to be stapled and scoured, and the *value* of each fleece placed against it—and to give to the gentlemen competitors and the world, his decision and his views at large on the comparative excellence of the two kinds of sheep and their fleeces; and the wool-growers throughout the United States are respectfully and earnestly invited to participate in this competition, the results of which are deemed important to the wool interest, and to shear at the clip of 1847, a like number of lambs, (and if there be any variation from one year in the age, have the certificate state that variation particularly,) and to obtain the proper and well authenticated certificates, and send them with the clip to the above-named umpire, who will report upon the whole, and award the meed of honor to whom it may be due, and make the report public. The reader will understand that Perkins & Brown have a very choice flock of Saxons, and Mr. Blakeslee, a very choice flock of Merinos.

It was unanimously voted that this report be signed by the chairman and secretary, and published in the Lowell Courier, and that the papers friendly to the wool interest throughout the country be requested to copy. SAMUEL LAWRENCE, Ch'n.

George Dana, Sec'y.

SHEEP AND WOOL.

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We have received a communication from Mr. Jacob N. Blakeslee, of Watertown, Ct., on the subject of sheep and wool, from which we make the following extracts.

In reference to breeding sheep, Mr. B. makes an observation, the truth of which we think all will admit, viz., that "It is one thing to *collect* a fine flock of sheep by selecting here and there one from the finest flocks in the whole country; and it is quite another and much more difficult thing, to *improve* a flock by the art of breeding. In the former case, improvement is only transferred from one to another; in the latter, the real value of property is actually increased."

Mr. B. thinks too many wool-growers in this country have run into extremes. He says—"after the introduction of Saxon sheep to this country, it seemed to be the great aim of the wool-growers to produce the *finest* wool, without regard to the weight of fleece or the constitution of the sheep. After awhile many saw their error. The next move was to see how *great* a fleece could be got, without regard to fineness and softness. These are the two extremes; let them be shunned, and let it be the endeavor of the wool-grower to combine as many valuable and essential qualities as possible in the same animal, or in the same flock of sheep.

"In selecting male animals for breeders, we should take great pains to procure those of pure blood and the most perfect forms. At least three out of four animals partake largely, in their outward coat and appearance, of the male parent. In breeding fine-wooled sheep, this is an object of great importance, as their outward coat constitutes nine-tenths of their value.

"I have always bred from the best buck I could raise or find, but since I purchased the one in 1828, bred by Daniel Bacon, [see Cultivator, for 1844, p. 335,] I have not been able to find one not of my own breeding that suited me to use in my own flock. * * * I never sell any of my best ewes till they are advanced in years."

AGRICULTURAL STATISTICS OF NEW-YORK.

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Mr. Tucker—The June number of your most excellent Cultivator is now before me, and I cannot omit here to express the pleasure and satisfaction which I have derived from the perusal thereof. It is, and has long been a matter of surprise to me, that a periodical whose every page teems with matter of the greatest interest and usefulness to the farmer should not receive a large addition to its already extensive list of subscribers.

I have taken up my pen now more particularly to call your attention, and that of your readers, to an article in the June number, which will no doubt be extensively copied into other journals throughout this country not only, but also abroad, containing errors in some of its details calculated to give a wrong impression, and which I think should be immediately corrected.

I refer to the agricultural statistics of this state, furnished to you by Mr. Randall. Statistics form the basis of all human calculations, and it is therefore of the greatest importance that when given to the public they should be in all respects absolutely and positively correct.

So much of the article of Mr. R. as refers to the population, number of horses, cattle, horses, sheep, swine, and the produce and average yield per acre of wheat, is probably correct. But when he states the average yield per acre of *spring crops,* he dips into a very extensive error, as he himself will perceive by referring carefully to the returns of the marshals.

The census was taken the first day of July, 1845. The number of acres *at that time* under corn, rye, oats, barley, buckwheat, peas, beans, flax, potatoes, and turneps, was the number returned by the marshals, while the amount given of the produce of each of these articles was that of the previous year, 1844, and a correct average yield per acre cannot thereby be made to appear.

But let us look at the dairying operations. The marshals give us the number of cows that were milked in July, 1845, and the amount of butter and cheese made during the year 1844. Of course tthe average yield per cow is incorrect.

When the marshal of our town called upon me, I remonstrated with him on the subject, and the census of our town at least would have been taken in a proper manner had not the circular of the Hon. Secretary of State been issued. That profound paper directed the marshals to proceed precisely in the manner they did proceed, thus giving to the public a collection of agricultural statistics which are worthless. J. L. H.

Castile, Wyoming Co., N. Y.

WHEAT AND CHESS—AN INCIDENT.

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I lately made a short journey in company with an intelligent and experienced farmer, whose fine farm and heavy crops have long told the skill with which he managed his business, when the conversation turned upon the transmutation of wheat to chess. He mentioned several strong cases to prove the change of one plant to the other—cases where clean seed had been sown on new land, and heavy crops of chess were the result. As is usual in such cases, unless I could assign a satisfactory cause, though knowing nothing of the circumstances, the assumed and unsatisfactory explanation by transmutation was regarded by my friend as the only true one. I mentioned the observations I had made on chess—its small and hard seeds allowing it to be carried about in the stomachs of animals, birds, &c., while the land was yet forests, and thus distributed; its astonishing productiveness where it could flourish, as where wheat had been killed, and the chess remaining the undisturbed occupant, yielding and scattering sometimes 3000 to 5000 seeds from a single grain, as I had counted; and again when shaded by heavy wheat or grass, being two inches high with only a single grain, as I had also observed. Collateral cases were named where supposed clean land, or new land, had been plowed and produced as spontaneous crops, a dense growth of pig-weed, in one case, and fox-tail grass, in the other case. But this was not quite satisfactory to my friend. I then stated that I had often examined what was *called* clean seed wheat, and found on a careful search, chess enough to seed the ground for a tolerable chess crop. Being about to make a call on an excellent and skilful farmer, I determined to prove my position; and so, the first opportunity, we examined some very fine seed wheat. It was pronounced by all parties as remarkably clean. Having scarcely ever failed in finding chess, I began the search, confident of gaining my point; but after a long and careful examination, I utterly failed. Not a grain of chess could be found. At last, turning to the owner of the seed, I inquired, "Don't you ever raise any chess?"—"NO!" was the prompt and decided answer, "I have completely eradicated the weed from my farm—I sow none but clean seed, really so, not apparently; and where my wheat is winter-killed, no chess springs up in its place, stooling out on all sides for a heavy crop. Whatever others may experience, I find that chess will not grow unless it is first sown."

The argument was finished. X.

MR. COLMAN'S EUROPEAN AGRICULTURE—PART VI.

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The principal subjects of this number are, Paring and Burning, Admixture of Soils, Improvement of Peat Lands, Warping and Drainage.

The operation of paring and burning, to which the first chapter is devoted, has been long practised, although its utility has been much controverted. In reference to the contradictory opinions which have been held on the subject, however, the remarks of the Rev. W. L. RHAM (Dictionary of the Farm, p. 368,) may be given as affording a rational explanation. "When we come," says Mr. R., "to apply to the subject the test of experience, and reason correctly on the facts which are presented to us by the abettors of the practice and its adversaries, we shall find that the advantages and disadvantages arise chiefly from the circumstances under which the operation is carried on.

Mr. COLMAN remarks, that the objects of paring and burning are three fold:—"the first, to reduce the coarse vegetable matter on the surface to a state of decomposition, that it may be supplanted by a more profitable vegetation; the second, to destroy grubs, insects, and the larvæ of insects, which infest the soils, and are pernicious to the cultivated crops; and the third, to convert the coarse vegetable matter on the surface into ashes, for nutriment of the crops which are to follow."

Mr. C. describes, with considerable minuteness, the process of paring and burning, and believing that his description may be read with advantage by a large portion of our readers, we give it at length.

"In the process of paring and burning, a thin slice, or turf, varying from one to three inches [in thickness] is taken from the surface, and after being sufficiently dried, is cut into pieces of a convenient length, and then piled in heaps preparatory to being burned and reduced to ashes. The turf is cut sometimes with a plow with a broad share, of the width of the slice desired to be raised, or, otherwise, with a spade made with a flange or wing on one side of the blade, resembling, in this respect, a spade for the cutting of peat, and with a long curved handle with a cross-piece at the end, by which it is forced under the sward by a pressure against the thighs of the workman. The work, when performed with the spade, is deemed severe, and it is considered a sufficient day's work for a man to accomplish a quarter of an acre.

"The sods, when collected, are piled in heaps of a larger or smaller size, according to the convenience of the operator, pains being taken to form a sort of furnace beneath, in which are placed some brush-wood, fagots, or coal, as in the oven of a brick-kiln. The sods are piled over this, and, fire being kindled, attention is paid to prevent its blazing out, so that whenever a hole is found, by which the fire might escape, it is immediately filled with fresh earth; and as the fire advances, new sods are occasionally heaped upon the pile; the object being to reduce the whole to ashes by a smouldering fire. It is surprising to find to what a fine state the sods and vegetable matter may be reduced, and how the burning will continue to go on, though the whole seems to be in a perfect state of quiescence. A thorough burning requires frequently a month, or a longer time for its completion.

"The head-lands of a field are occasionally burned without the rest of the field being subjected to the same process. Here there is always an accumulation of soil and a collection of rubbish, coarse grass, weeds, or bushes; and all these are dug up occasionally to the depth of six or ten inches, and piled in heaps and burned as I have described. In cases where the whole is not consumed, the part which is not sufficiently reduced by the action of the fire, is transferred to another heap. Two or three pieces of advice are commonly given in regard to the management of this burning. One is, not to make the heaps too large in the beginning, as the weight of the incumbent mass is liable to extinguish the fire, but to heap it up gradually as the fire goes on; the second is, not to allow the fire to blaze out, as else it would soon burn itself out; and a third is, not to make the fire too hot, as otherwise much of the earth, instead of being made to crumble, and reduced to a friable state, would become baked hard, like bricks.

"The ashes, then, of these heaps are evenly spread over the fields operated upon, and this is generally followed by a green crop, such as vetches or turneps, which, under good management, are consumed on the ground. Then follows the usual coarse of wheat, barley, and grass. The amount of ashes obtained by the ordinary process of paring and burning, has been made the subject of exact calculation, and is so remarkable that I deem it worth stating. 'An acre of land, from which the turf was taken in the common mode of paring and burning, appeared to have produced an average of 2660 bushels of ashes, which, at their mean weight of 65 pounds to a bushel, when dry, would give 172,900 pounds, or rather more than 77 tons per acre.'"

Mr. COLMAN observes, that as the process of burning dissipates, more or less, the vegetable matter of the soil, we must look to the ashes produced as some compensation for this loss. The ashes, he believes, "are powerful absorbents and retainers of moisture, and they answer a valuable purpose in the disintegration, or loosening of the soil. They certainly, in many cases, operate as efficient manure; I have seen their effects often, both upon old and new land. In examining the returns of nearly four thousand different wheat crops in Massachusetts, in which, with a view to secure the premium offered by the state upon the cultivation of wheat, it was required to give the mode of culture in detail, I found, in every case, where ashes were applied to manure the crop, the beneficial effects were emphatically affirmed. In clearing new land, it has been the custom to fell the standing wood, and after it has become sufficiently dried, to burn it completely upon the land. This always leaves a large deposit of ashes on the ground. It is common to plant Indian corn directly upon these ashes, without plowing the land, and, at the close of the season, at the last hoeing of the corn, or indeed its only hoeing, to sow wheat among it, which, to use the common phrase, is 'hacked in' by the hoe. Some of the largest crops of Indian corn and of wheat, which I have ever heard of, have been grown in this way. In one case, upon a very large field, the product of wheat averaged sixty-four bushels to the acre."

But though the advantages of paring and burning on some kinds of soil, seem to have been well demonstrated in many cases, it appears to be equally certain that on dry, sandy soil, the practice is not to be recommended. Mr. COLMAN therefore observes:

"The expediency of paring and burning land, must, as I have remarked, depend upon the nature of the soil which is to be subjected to the process. On light, sandy, or gravelly soils, where the vegetation is thin and sparse, it is strongly objectionable."

Under the head of "BURNING LAND," a process different, in some respects, from ordinary paring and burning, Mr. COLMAN further discusses the principles upon which are supposed to rest the advantages of both these operations. The objects of burning lands are said to be applicable only to stiff, clay soils. The chief objects are to render it friable and destroy its adhesiveness. "The process," says Mr. C., "consists in digging, either with a plow or spade, the whole top-soil of a field, and placing it in small heaps, with a furnace, or oven under them, where a fire of coal, or faggots, or brush-wood may be kindled and continue to burn until the whole is, properly speaking, reduced to an ash-heap, as far as the nature of the substance so reduced admits of being so designated. Where I have seen the process carried on, the depth of soil so dug and burned, did not much exceed a foot; but I have been made acquainted with one experiment where the depth of soil so moved and reduced was three feet."

Mr. C. is decidedly of the opinion, from all the evidence he has been able to collect, that "the opening of clayey and adhesive soils by burning them, so as to make them easily worked, and rendering them accessible to air, and moisture, and light, and heat, is an obvious and decided advantage."

The most reasonable explanation which we have seen of the causes, which probably operate to increase fertility in soils which have been subject to burning, is furnished by Mr. C. in an extract from Liebig's Agricultural Chemistry.

"The advantage" (says LIEBIG,) "of manuring fields with burned clay, and the fertility of ferruginous soils, which have been considered as facts so incomprehensible, may be explained in an equally simple manner. They have been ascribed to the great attraction for water exerted by dry clay and ferruginous earth; but common dry, arable land, possesses this property in as great a degree; and besides, what influence can be ascribed to a hundred pounds of water spread over an acre of land in a condition in which it cannot be serviceable either by the roots or leaves?

"The true cause is this: The oxides of iron and alumina are distinguished from all other metallic oxides, by their power of forming solid compounds with ammonia. The precipitates obtained by the addition of ammonia to salts of alumina or iron, are true salts, in which the ammonia is obtained as a base. Minerals containing alumina, or oxide of iron, also possess in an eminent degree the property of attracting ammonia from the atmosphere and retaining it. * * * Soils, therefore, which contain oxides of iron and burned clay, must absorb ammonia—an action which is favored by their porous condition. They further prevent the escape of ammonia, once absorbed by their chemical properties. * * * The addition of burned clay to soils has also a secondary influence. It renders the soil porous, and therefore more permeable to air and moisture. The ammonia absorbed by the clay of ferruginous oxides is separated by every shower of rain, and conveyed in solution to the soil."

THE VIRGALIEU PEAR, (or *Doyenné*, *Butter*, or *St. Michael*,) considered in Western New-York as the finest of pears, all things considered, long since in the vicinity of Boston "run out" from the old age of the variety, as was supposed. B. V. French, an eminent cultivator, stated at a late agricultural meeting in the Boston State House, "that it now appeared to be returning to its former health, vigor, and excellence."

GAS-WATER TO KILL INSECTS.

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A writer in the *Gardener's Chronicle* states that he has derived great advantage from the use of gas-water in destroying, or driving away insects. He states that he has tried it of various strengths, but concludes it should be diluted in six times its quantity of pure water, or it cannot be applied without injury to vegetation. At this strength he has found it almost instantaneously destructive to snails and slugs, and drives away almost every species of worm. We suppose the gas-water to be what is here called the ammonical liquid of gas-works. Gardener's Dictionary states that it consists of water holding in solution carbonate, muriate, and sulphate of ammonia, with impurities; 100 gallons containing 25 pounds of these salts. It is thought highly valuable to mix with compost, as manure—to be used at the rate of 100 lbs. per acre. It is said to have in some instances trebled the yield of grass.

NOVELTY IN BEE-HIVES.

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THE Report of the Commissioner of Patents speaks of a newly invented bee-hive, which we take to be the *latest* if not the greatest novelty in that line. The great aim has for several years been to protect the bees from the attack of the moth, and many have been the contrivances invented for this purpose. The hive alluded to, has a *hen-roost* combined with it, the connection between the roost and hive being such that the hens on going to the roost shut up the entrance to the hive, and bar out the moths—the latter only attacking the hive at evening or during the night. In the morning, the hens, on passing from the roost, open the hive and let out the bees to commence their daily toil. But IMPROVEMENT *and novelty are two things*.

DISEASE IN CHERRY TREES.

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MR. TUCKER—On a recent visit to Ohio, in the vicinity of Cincinnati, I observed that the past winter has been fatal to most of the finer varieties of the cherry tree.

Some of the Cultivators informed me that they feared they should be under the necessity of abandoning altogether the cultivation of this early and delicious fruit.

On examination, I discovered that the trees are first affected on the south-east side of the stem, showing a dead strip from the ground to the lower branches, many of them leaving out, but soon wither and die.

I attribute the cause of the destruction of this tree, not to the effects of severe frost, but to the frequent and sudden thawing by the morning sun.

The trees generally survive but two or three winters after being transplanted; for as soon as they become firmly rooted, the increased size of the sap vessels, the consequence of rapid growth, renders them liable to be thus affected.

I would propose as a cheap and effectual remedy, the following:

Take two strips of boards, say from four to six inches wide, and long enough to extend from the ground to the lower branches, and nail the two edges together at right angles, and during winter place one of these on the south side of each tree, securing them by two strings. These may be stowed away in summer, occupying but little space, and will last an age.

Albany, July, 1846. H. P. BYRAM.

GLASS MILK-PANS.

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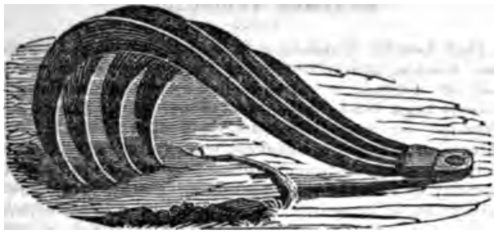
WHY can't we have glass milk-pans in this country? They are being introduced in the English dairies, and are much liked. They are said to be much more easily cleaned than pans of any other materials, and are so strong that they will bear a very severe blow without breaking. The only objection to them is their cost, which, on account of duties, is rendered high. We suppose they might be afforded cheaply in this country.



ROOT AND BUSH PULLER.—(Fig. 68.)

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August and the fore part of September are the best months for clearing and improving boggy and wet lands. Such lands are often more or less covered with small trees, or bushes which grow in stools or clumps. The implement above represented is very effective in tearing out such trees or bushes. It is made of iron and is very strong. The ground is first (if the roots are large) loosened around from the centre of the stool, when the claw is fastened to one side, and a pair of oxen are attached by means of a chain to the implement, and the roots are forthwith "twitched" out. One man and a smart yoke of oxen with this tool, will do the work of ten men.

RECENT AMERICAN PATENTS.

Reported for "The Cultivator," by Zenas C. Robbins, *Mechanical Engineer, and Agent for procuring Patents, Washington, D. C.*

For an improvement in self-acting Brakes for Carriages; John Dubois, Jr., Trout Run, Lycoming Co., Pa., June 13, 1846.

Claim.—"What I claim as my invention, and desire to secure by letters-patent, is the placing on the rear ends of the extended hands *(C, C,)* which support the pole, an adjustable movable sway-bar, *(E,)* having brakes or rubbers attached to each of its extended ends in a position to act on the forward wheels of a wagon or carriage when its forward motion is retarded by the pole, the adjustable sway-bar being connected to and operated by the pole by means of connecting rods and levers; the whole combined and operating substantially in the manner and for the purpose herein set forth."

For the improvement in Clover-Hulling Machines; Martin H. Mansfield, Mifflintown, Pa., June 6th, 1846.

Claim.—"What I claim as my invention, and desire to secure by letters-patent, is the manner in which the projecting rubbers, *(c, c,)* in the concave *(B,)* and cylinder *(A,)* are combined and operate with each other, viz., their backs being broad, (either straight or wedge-shaped,) and their roughened sides tapering to a sharp edge at their fronts, are placed in the concave and on the cylinder, and in such a position that the front edges of the revolving rubbers on the cylinder will pass between the front sharp edges of the rubbers in the concave; the clover seed or rice being hulled by the action of the oblique side of the rotating rubbers while passing between the oblique sides of the stationary rubbers."

POTATO DISEASE.

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Some persons have recommended cutting off the tops of potatoes to save the tubers from rotting. The theory is, that the disease first attacks the tops, and that by cutting them off, the disease is prevented from passing to the tubers. We cannot say how much soundness there is in this theory. So long as the tops remain healthy, we would by no means advise cutting them; but where the disease has already attacked the tops so as to disorder the sap, it seems reasonable the tubers can derive no further advantage from their connection with the tops, and it is not improbable that the separation, by preventing the flow of the disordered sap to the roots, may tend to prevent the decay of the latter.

A writer in the *Saturday Courier* mentions a case where a man mowed off the tops of his potatoes as soon as they showed symptoms of disease, and on digging them they proved sound. But it should be remembered that to have made the experiment decisive, alternate rows through the lot should have been cut and left standing. The difference, if any, in the condition of the tubers in the cut and uncut rows, would have shown the effect produced by cutting off the tops. As it was, however, it is questionable whether the soundness of the potatoes was attributable to cutting the tops. We could cite several cases where the tops were considerably attacked, and the growth of the potatoes evidently checked by the disease; but yet remained sound till harvested, and even kept quite well through the winter.

PRESERVATION OF SWEET POTATOES.

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Mr. Tucker—I send you the following method of keeping sweet potatoes, which I have practised with complete success for several years, having now some large yams as sound as they were when dug.

Select a high dry spot, make a circular bed of six or seven feet in diameter, elevated a few inches above the surrounding earth by digging a trench 8 or 10 inches deep, and throwing the earth taken out of it on the bed; throw down a layer of dry pine straw, 7 or 8 inches thick; take the potatoes immediately from the patch as they are dug, and put them on the bed without being bruised, from 30 to 50 bushels in a bed.) Over them throw a layer of dry pine straw, 5 to 6 inches thick; over the straw a layer of pine bark pulled from dead or decaying logs, throw on earth to the depth of six inches, and on the whole make a slight shelter of pine boards. Leave a small *hole* at the top of the bark *without earth*, covered with a piece of pine bark, to let the steam escape. In April, take potatoes and remove them to a dry and cool room in the barn or other out house, and spread them over the floor, and you can eat them till June or July. H. F. B.

Kingston, N. C., 1846.

FATTENING CATTLE.

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At a late meeting of the Newcastle (England,) Farmer's Club, an account of which we find in the *Agricultural Gazette*, Mr. Glover, the secretary, spoke of his mode of stall-feeding cattle. He said he was particular to have his cattle fed at stated times. The cattle, he said, "knew perfectly when meal time had arrived, and were restless and uneasy when disappointed of their food." He thought "cleanliness and a good supply of litter should never be neglected. To keep the skin clean, and use the currycomb liberally, tended to fatness." He remarked that the food should also be given with regularity as to quantity. "They should not be exposed to alternations of hunger and surfeit. The food of cattle should also be varied as much as possible. Like human beings they were fond of variety and capricious in their appetites. Two pounds of oil-cake, five pounds of barley-meal, and five pounds of hay chaff, with a plentiful allowance of Swedish turneps, had been recommended as a daily allowance."

He spoke of the use of linseed oil in feeding, which he said had been attended with much success. "The oil was sprinkled on good oat straw, layer after layer, at the rate of a gallon of oil to a week's allowance of straw. The straw to be frequently turned over, and kept two days before used: by which time the oil would be absorbed, and there would be a slight fermentation in the food." He described, also, the mode of making *Warnes's Compound*, which is highly esteemed for fattening cattle. "He put 166 lbs. water into a boiling cauldron, and when boiling, stirred into it for five minutes, 21 lbs. linseed meal. Then 63 lbs. of crushed barley was sprinkled upon the boiling mucilage, by one person, while another rapidly stirred the mixture. This occupied another five minutes." It is then left to cool—if there is much fire it should be put out. It should be used the next day, or by being excluded from the air, may be kept longer. The quantity given to each bullock per day, is eight pounds, with hay or straw in addition.

THE KITCHEN GARDEN.

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MR. TUCKER—Permit me through the medium of the Cultivator to call the attention of farmers more generally to the practice of using the *water-pot* in their gardens. The garden is generally too much neglected; this should not be so. The kitchen-garden is the source from which many of our delicacies of food are to be derived. It is an excuse urged by farmers in general, that they have "no time to spend in the garden," and allowing themselves to be governed by this idea, they seldom spend but very little time in them after their planting.

Now I would recommend to every farmer who pretends to have a garden, to spend more or less time every day in hoeing and watering it. This is the only way by which good and luxuriant crops of garden products can be obtained. The garden should be visited every day during drouths, with the water-pot. The best time for watering is immediately after sundown, as the water has a chance to soak into the earth before the morning sun comes up to bake or harden the soil. In watering, care should be taken not at any time to use cold water. Well water should not be used unless it has been drawn for a day. Soap-suds and the washings of barn yards are excellent fluids for watering.

Time spent in the garden is never lost. When your healthy-looking vines yield their rich delicacies, and the garden gives up its substantial and palatable eatables, then will you not grudge the time spent in it.

NICHOLAS.

Watertown, July 2d, 1846.

WOOL GROWING.

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MR. EDITOR—Can you tell me what encouragement there is for a wool grower to strive hard to improve his flock, while the present feeling and policy of the manufacturers exist? For years the farmer has been deafened with the cry that wool is lower this, than last year; and now their agents talk of its being five or six cents less, and they must buy it at this reduction or not at all. I will venture, if a memorandum had been kept for a few years past, it would be found that by this time they would require a small premium to induce them to take it at nothing, if their assertions are to be believed. I would ask the manufacturers, if they believe this course just, even to their own interests? Can they expect the farmer to spend his time looking up fine crosses and paying $20, $30, or even $50 for bucks to improve his flocks, if he is always to be met with the never failing cry of "wool is falling." Let me tell them that a silent change is fast going on; heavy-fleeced, middling wool, is fast superseding the really *fine*. Why, because no discrimination is made between the qualities, commensurate with the expense of producing the fine. Will they be wise in time for their own interest?

A WOOL GROWER.

PRESERVING TIMBER.—S. W. Jewett of Vermont, impregnated in 1834, a stick of basswood timber, (which decays more rapidly than nearly all other kinds of wood,) with a solution of blue vitriol; it was green, cut in June. It was partly buried in the ground, and exposed to constant alternations of moisture and dryness. In eleven years "it was, to all appearance, as sound as when first cut. The remaining portion of the tree, unimpregnated, had decayed years before.

WEATHER PREDICTIONS.

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THE London *Gardeners' Chronicle* furnishes an extract from an article written by the celebrated astronomer, M. ARAGO, in which he states that he has "frequently been led to consider whether it will ever be possible, by means of astronomical calculations, to determine, a year in advance, what in any given place will be the annual temperature, that of each month, the quantity of rain, or the prevailing winds." The results of these investigations, he observes, "*demonstrate peremptorily that the lunar and cometary influences are scarcely sensible*; and therefore that weather prophecy can never be a branch of astronomy, properly so called. For, in fact, our satellite and the comets, have been in all times considered, in meteorology, as the preponderating stars." He protests "loudly" against those predictions which are yearly laid before the public in his name, and says: "No word has ever issued from my mouth, either in the intimacy of private conversation, or in my courses delivered during thirty years—no line has ever been published with my assent, which could authorise the attribution to me of an opinion, that it is possible, in the present state of our knowledge, *to foretell with certainty what the weather will be a* YEAR, A MONTH, A WEEK—nay, I will say, A SINGLE DAY, in advance."

Such, then, are the conclusions of the greatest astronomer of the age, in regard to *weather-prophecy*. What will our *weather-wise* (?) almanac makers say to them?

ROTTING HEMP.

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THE Report of the Commissioner of Patents states, that important improvements have lately been made in the preparation of hemp and flax, particularly in the rotting process. Water-rotting, according to the old mode, occupied from five to fourteen days, and dew-rotting, from two to six or eight weeks. It is stated, that under the recent improvement, the whole process is gone through within "a day and a-half, or two days at furthest." In the old mode, the natural temperature of the air or water is relied upon; in the new mode, artificial heat is resorted to. The hemp or flax is put into large vats, and steeped in warm water, until it is completely macerated; and as soon as it is brought to this condition, the temperature is suddenly raised to the boiling point, which arrests all further rotting. The critical point in hemp-rotting, is to check the putrefactive process at the proper time, and where it depends on the temperature of the air, it requires great discernment to ascertain when the operation must be checked.

LOCALITIES FOR PEACH ORCHARDS.

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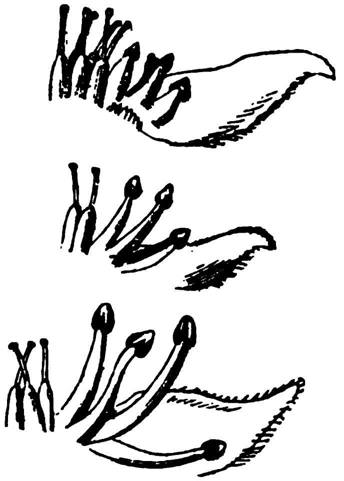
THERE is little doubt, that in many parts of the country, where the peach is not raised from the severity of the climate, a selection of locality would give regular crops. The great advantages derived from nearness to large unfreezing lakes, is well known. The superiority of hills over valleys, has often been noticed; the former being colder in summer, and favoring a more moderate and well ripened growth of wood, and being less subject to sharp frosts on clear nights.

A very striking case was lately mentioned to us by R. Raymond, of Conhocton, Steuben Co., New York. The river valley at that place, though many hundred feet above the level of the sea, is much lower than the surrounding country, being flanked by hills about 500 feet high. In the valley, the peach cannot be cultivated, he himself, as well as others, having had their trees killed completely to the ground in winter. But on one of the neighboring hills, 500 feet above, an orchard has been planted, where not only the trees themselves escape, but they yield regular crops of fruit. This hill is probably over 1,200 feet above the level of the sea. The experiment, both on the hill, and in the valley, were made on dry firm soils.



THE STRAWBERRY—FERTILE AND BARREN FLOWERS.—Fig. 69.

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It often happens, where accurate experiments take strongly opposite grounds in theory, that "both are right, and both are wrong." Three opinions appear to have been adopted relative to the character of the strawberry, or of certain highly improved varieties; one is, that there are staminate or barren plants, which are absolutely necessary to the fertilization of the pistillate ones; this opinion is held by N. Longworth and others of Cincinnati. A second opinion regards these staminate plants as wholly useless, and as cumberers of the ground, and should therefore be all rooted out; this is held by A. McIntosh of Cleveland. A third opinion, held by A. J. Downing, C. M. Hovey and others, is intermediate between the two others, and regards sterility, not as an essential, but as an induced character, and that, though some varieties may be increased in fruitfulness by the proximity of staminate plants, that the latter are not always essential to the perfection of the fruit.

The writer has lately made some microscopic examinations, with an achromatic instrument of the best construction, with a view to elicit light on the subject, the results of which may possibly be interesting to cultivators. Three varieties were selected,—Hovey's Seedling, usually but erroneously regarded as destitute of stamens, and as entirely pistillate; the Dundee, in which the stamens are small, but readily observed; and the large Early Scarlet, where the stamens are large, fully developed, and very conspicuous. The above figures represent magnified views of portions of the flowers of these three varieties. In Hovey's Seedling, the stamens, which, as in all other flowers of this natural order, adhere to the inner rim of the calyx, are so short, that they are entirely hid by the mass of longer pistils. They are evidently imperfect and *flattened*, partaking thus, in a slight degree, the character of the petals of a double flower. The figure represents a portion of the germs with their surmounting pistils on the left, and one of the sepals of the calyx with the adhering stamens, on the right. In the second figure, representing the Dundee, the stamens are much more perfect; and in the Early Scarlet, shown by the third figure, they are very large and distinct, and contrast strongly with the first.

To ascertain if the anthers of Hovey's Seedling possessed any fertilizing power, many careful observations were made with a compound achromatic microscope, with the best constructed sextuple object glasses. From some of the anthers, no pollen (or fertilizing dust) was obtained; they, however, usually afforded a very small quantity; and their fertilizing power appears to be slowly developed, as they burst and discharge the minute portions they contain, in most cases, about the time or after the petals have fallen. The anthers of the Dundee, afforded pollen in much greater quantities; and the Early Scarlet yielded it in profuse abundance. It may be proper to remark, that from the comparative smallness of the stamens in the Dundee, it would be pronounced by a superficial observer, as pistillate only. The Early Scarlet was merely taken as a representative of several other varieties possessing perfect flowers, as the Elton, Ross Phœnix, and Alpines. The Duke of Kent was frequently found with as imperfect stamens as Hovey's, and again with as perfect flowers as any others.

A single experiment was tried, in cultivation, with Hovey's Seedling. A bed of this variety, twelve feet from a bed of the Early Scarlet, has, in most cases, perfect and well formed fruit. Single plants had been also placed at distances from the first bed, of five, nine, and twelve rods respectively; on all these equally, the fruit is very evidently more imperfect, most of the berries being only partially developed from imperfect fertilization, and but few fully formed and well filled to be found. These were all in a newly planted field, far away from any other strawberries. This experiment, so far as it goes, (with the microscopic examinations,) tends to show, that though Hovey's Seedling may sometimes fertilize itself, yet the process is greatly facilitated by nearness to other strongly staminate varieties; but to be more satisfactory, the flowers should have been covered with a gauze-covered frame, so as perfectly to exclude the bees. In the present instance, no bees were ever noticed on any of the flowers.

J. J. T.

MANUFACTURE OF AGRICULTURAL MACHINES.

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The *Rochester Democrat* notices Mr. John A. Pitts' factory for the manufacture of various kinds of agricultural machinery. He has lately erected a new building, which, it is said, is three stories high, 120 feet long, 33 feet deep, with a rear 90 feet in length, the whole occupied with the various branches of the works, which are propelled by steam. Twenty-seven men are at present employed, and with the facilities afforded, are capable, it is said, of turning out $30,000 worth of machinery in a year. The principal machines at present made here, are Pitt's threshing machine and separator, superior horse power, and Pitt's corn and cob mills.

These machines are well known and highly valued. We have several times spoken of them in the Cultivator, and we are glad to find that the demand for them is such, that the ingenious inventors, (Messrs. J. A. & H. A. Pitts,) are likely to be rewarded for the immense expense which we know they have incurred in bringing them to perfection. Some valuable improvements are said to have been added lately to the threshing-machine and separator. It is said to be capable of thrashing and cleaning for market, between four and five hundred bushels of grain per day.

WEEDS—HINT FOR THE SEASON.

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A very common instance of neglect at this season of the year, and through the middle and latter part of summer, is the omission of the continued destruction of weeds. Corn, potatoes, ruta bagas, carrots, and other hoed crops, usually receive one or two good dressings with the hoe and cultivator early in the season, and are afterwards neglected. How many fields of corn, exhibit in autumn, when the crop is cut up and cleared off, a smooth clean surface, like a newly ploughed field, as they ought to? instead of which, we far more frequently see half a ton of luxuriant weeds to the acre.

The old saying is, "one year's seeding will make five year's weeding." But there is another reason why weeds should never be suffered to go to seed. The exhaustion caused by growing vegetables, which are destroyed on the surface, and not buried in the soil, every one knows; but the exhaustion produced by the *forma* *tion* and *ripening of seed*, is not so well appreciated. It has been justly remarked, that it requires more strength of soil to form the half-ounce of seed on a single plant of the turnip, than to grow the large succulent bulb in the ground, though weighing fifteen pounds. Hence the great importance of never allowing a crop of weeds to draw the life from the soil in ripening a crop of seed.

The importance of cutting up and destroying weeds when only an inch high, before they have shaded and stunted the young crop, and when the work can be done with one tenth of the labor subsequently required, needs no reasoning to show its policy. The advantage of keeping the soil *entirely free* from the seeds of weeds, so that the necessary stirring of the surface may be entirely performed by the plough and cultivator, instead of by hand, is equally obvious.

INDIAN CORN.

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M. W. Phillips, of Edwards' Depot, Miss., writes in the July Cultivator, a very practical article on the culture of Indian Corn. He is right when he says, corn will not *fire*, i. e. curl, in a garden, with deep tilth and good dressing, as in the field, where the roots are torn by deep culture. Experiment has convinced me, that so far as profit is concerned, there is no vegetable grown north of the tropics, that will yield the same quantum of food for man and beast, to the rod square, as Indian corn, particularly in a clay loam, well ameliorated by coarse manure. Six square rods of corn, planted four inches apart, in drills three feet apart, will, after the middle of June, this year, furnish a daily baiting of stalks or suckers to a cow, until the corn is ripe, when the remaining stalks will be still more nutricious, if cut as soon as the corn is hard. When thinned out to about eight inches apart in the drills, each stalk left will produce from one to two ears. The richer the soil, the less the necessity of hoeing, as it then contains an atmosphere of its own, which needs little aid from tillage, after the first hoeing. S. W.

LABELS FOR FRUIT TREES.

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AT page 382 of the Cultivator for 1844, is a description of a zinc label for fruit trees, with directions for making the ink to write on them; thinking this the most desirable and economical plan I had seen, I, with a neighbor, made some of the labels as per direction; but we found that the writing, on exposure to the air, turned quite white, leaving the form of the letters, but becoming nearly unintelligible. This was owing, as we suppose, to the oxidization of the zinc; but we found, that the spreading a coat of copal varnish over the label, when the ink was dry, prevented the oxidization, and the writing preserved its fine jet black color. Gum shellac, dissolved in alcohol, spread on in the same way, will preserve the name, but it becomes somewhat yellow. Varnish makes the best coat, i. e., it preserves the glossy black of the ink best. We prepare the labels as there directed, and after the writing is dry, spread on one coat of varnish with a small brush, and the work is done. If this ink proves durable, (and it cannot be washed out,) this is the best way to label trees I have seen. A label need not cost more than the fifth of a cent, including the copper wire, when made by the quantity, and it must last a great many years. Every lover of fruit and fruit trees will provide himself with so important a thing as a correct list of his valuable trees, when it can be done so easily. H.

Ohio, 1846.

CARROTS.—S. Brown, in the Boston Cultivator, says, "We have fed two farrow cows with carrots from the time of housing to the present date, and the result is, they have given nearly twice the quantity of milk they would have produced without them, and of a richer quality; the butter made from them, churns quick, and is nearly equal to June butter."

FACTS AND OPINIONS

Condensed from various Exchange Papers.

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SAW-DUST ROUND FRUIT TREES, has been found eminently useful in keeping the ground moist in drouth, and in promoting the growth of the tree. Several bushels may be applied to a tree.

THE BORER IN APPLE TREES.—W. Buckminster, at an agricultural meeting at the State House, Boston, stated that the borer, which is a fly in its perfect state, lays ten eggs on the tree near the ground; that they hatch to young worms and enter the bark the first year; the next, they eat into the wood and ascend; and the third, come out and change to the perfect insect. He says the best remedy is to wash the trees with strong lye in July, after the eggs are laid, and before the worms have buried themselves in the bark.

ROOTS FOR COWS.—The Boston Cultivator says, that the disagreeable flavor of milk, and offensive odor in cellars, from the ruta baga, may be obviated by substituting the cabbage turnep, or turnep-rooted-cabbage, *below* ground; that it will yield as much or more than the ruta baga, keeps well, imparts no unpleasant flavor to milk, and like a parsnep will keep well in the ground the severest winters, and be ready for use in the spring. The turnep-rooted-cabbage, *above* ground, is less valuable.

ONIONS—PRESSING THE EARTH.—A correspondent of the Michigan Farmer, says an onion bed was made on a very mellow soil of gravelly loam spaded eleven inches deep. One half of the bed was trodden by the feet of a boy; the other half untouched. The bed was merely weeded. The onions which grew on the *trodden* part, "came up first, grew more thriftily, and were more than double in size and quantity those on the other half—being as good a yield as I ever saw."

RESPONSIBILITY OF NURSERYMEN.—An action was lately brought, in New-Jersey, against a nurseryman for having sold trees, a great number of which, on fruiting were found to produce *natural fruit*. The Judge ruled that the plaintiff could only recover the first cost of the trees,—and that the cost and labor in cultivating worthless trees, the rent of the land on which they grew, the loss of several years' time, and the loss of sale of many bushels of fruit, were not to be taken into account. The jury decided accordingly.

FRUIT TREES.—At a late meeting in Boston, John Owen of Cambridge, stated he cured the black wart on plum trees by cutting off and washing in salt water; and in another case, by washing with salt water only, the warts cracking off. S. Pond learned the value of salt for plum trees, by an inundation covering his grounds several feet with salt water, "killing every thing but his plum trees, and giving them new life, health, and vigor." Dr. Shurtliff, of Brooklyn, applied to unhealthy, unproductive plum trees, two quarts of salt each, in water; "the trees became healthy, and the ensuing season they bore too much fruit." He continued the application, and was not troubled with black wart nor curculio.

W. Buckminster said he had found roots of apple trees three rods from the trunk, that had been set out only sixteen years—a proof of the importance of a wide, deep bed of fertile soil.

YOUNG LAMBS.—J. A. Morton, of Hadley, Mass., treats young lambs which have been chilled, by immersing them in a tub of warm water, the temperature a little higher than blood heat, rubbing them and keeping them in long enough to become warmed through. He then takes them out and rubs them gently with flannel till quite dry. He does not feed them, till by running about and exercise, a keen appetite is created.

PROTECTING TREES FROM MICE.—A correspondent of the Gardener's Chronicle, mixes soot and milk till of the consistence of thick paint, and then applies it to the trees with a brush. This, applied once a year, he finds effectual protection against hares and rabbits. Would it not be equally so against mice?

Durability of Timber.—J. Townsend of Zanesville, in a communication to the New-England Farmer, speaking of the diversity of opinion relative to the best time for cutting timber, very justly remarks, that much less depends on the *season of cutting*, than on the treatment it receives *after it is cut*. For instance: a tree is cut perfectly green and full of sap; it is suffered to lie in large logs, with no chance of seasoning—the sap ferments, and the log partially decays. Another portion of the tree is, immediately after cutting, sawed into thin boards, which season in a few days, and the whole becomes dry and "tough and hard like horn." Hence, the influence of summer heat, in causing a more rapid evaporation and drying, under favorable circumstances therefor, and in promoting also a more rapid fermentation under other circumstances; the advantage of a season when the bark may be *peeled* to assist in drying, and its disadvantages when the bark *is not* peeled, by increasing decay, should all be taken into account.

Pruning Apple Trees.—A correspondent of the Boston Cultivator notices an objection to early summer pruning, generally overlooked. The newly forming wood and bark is then in an unusually tender state, and the weight of a ladder or of the feet on a branch, easily separates the bark, and seriously bruises and injures the tree.

Carrots—Rotation.—At one of the Boston Agricultural meetings, —— Gleason, of Wayland, stated that he had raised 800 bushels of carrots to the acre; on the *same ground* the year following, he had only 525 bushels. The ground was manured both years. The importance of alternation or rotation is here evident.

He found carrots to be the best of all roots; his cows fed on them in winter, yielded him *as much profit as in summer*. Eight hundred bushels to the acre were equal to sixteen tons—they were worth to him eight dollars per ton, or equal to $128 per acre. The tops were worth $5 per acre to feed swine in autumn.

Durable Shingles.—The durability of pine stumps is well known. S. W. Jewett says, in the Boston Cultivator, "There are house roofs of large buildings in this vicinity that are covered with shingles from the butt ends of pine trees more than forty years ago, that remain sound and good at present."

Pears.—J. M. Earle of Worcester, states, that a seedling pear tree, growing in a pasture, was pruned and grafted with the Bartlett, and produced pears enough the third year to sell for *eight dollars*.

INQUIRIES.

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Peaches.—G. S. P., (Randolph, Vt.) We do not believe there is a "rare ripe," or any other peach, the seed of which will produce fruit "always like the original."

Wind Power.—A Subscriber. We should suppose the "Centrific Wind-wheel," described in our last, would answer your purpose better than anything else we have seen.

Malay Fowls.—T. H. A., (Canton, Ct.) Some of the fowls called Malay, have feathers (as you describe) on the legs down to the feet. Their colors vary from dull yellow to black. The largest of them stand in the first rank as to size.

Carrot Seed.—S. S. G. The carrot seed you speak of as being two years old, we suppose will be a year older before you can sow it, as it is now too late for this season—hence you had better buy new seed than to use it. It will vegetate some at two years old, but not as well as during the first year.

Seed Planter.—R. A. B., (Macon, Ga.,) asks, "Haven't you an implement for planting seeds? one that makes the furrow, drops the seed, and covers it, at one operation? If so, will it plant seeds of all sizes, and corn, peas, &c.?" Lewis' seed planter answers all these requisitions admirably. Those who have tried it speak of it as the best they have seen. The price is $15.

THE CULTIVATOR.

ALBANY, AUGUST, 1846.

TO CORRESPONDENTS.

Communications have been received, since our last, from S. W. Jewett, a Subscriber. G. S. Paine, Chas. N. Ryan, Thomas H. Austin, Storrs Barrows, a Wool Grower, Wm. J. Eyer, Heber Van Volkenburgh, J. L. H., Herman Wendell, Nicholas, Levi Disbrow, Jason Smith, an Old Subscriber, W., S. W., John Keese, Ebenezer Bridge, S. S. G., X., P., H. L. Sheldon, and H P. Byram.

Books, Papers, &c., have been received as follows:

The American Journal of Science and Arts, conducted by Prof. Silliman and others. New-Haven, Ct.—$5 per year.

The American Journal of Insanity, edited by the Officers of the N. Y. State Lunatic Asylum. Utica.—Quarterly; $1 a year.

The Cayuga Tocsin, from Maj. J. B. Dill.

Premium Lists of the New-Haven (Ct.) Horticultural Society, of the Fairfield (Ct.) Agricultural Society, and of the Hartford Co., Ct., Ag. Society.

The Farmers' Library, Vol. I., neatly bound, forming a beautiful octavo volume of 664 octavo pages, and embracing Petzholdt's Lectures to Farmers on Agricultural Chemistry, and Thær's Principles of Agriculture; also, the Monthly Journal of Agriculture, vol. I., complete, by J. S. Skinner, and bound in uniform style with the Library. From the publishers, Greely & McElrath, New York.

Speech of Hon. E. B. Holmes, in the House of Representatives, on the Mexican War, from Mr. H.

Prize List of the New Haven (Ct.) Agricultural Society for 1846.—Exhibition to be held at Birmingham, Oct. 1st. From L. Durand.

Lardner's Popular Lectures on Science and Art, part 14. This part completes the work, forming two beautiful volumes of about 600 pages each.—Price $4.50.

Prize Lists of the Otsego and Oneida Agricultural Societies for this year. The Otsego Fair is to be held at Cooperstown, Oct. 1, 2; that of Oneida, at Whitestown, Sept. 24, 25.

S. W.—The paper was disposed of as requested.

N. C.—We know of no opportunity to dispose of the animal you speak of in this vicinity.

L. F. Payson—Should like to hear from you.

MONTHLY NOTICES.

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☞ In Mr. Jewett's article on "Improved Flint Wheat," in this number, the variety should have been described as a *bald wheat*, with a few short beards in the upper end of the head.

☞ In the article on "Principles of Breeding" in this number, the No. 1591 is applied to the bull, Red Comet, by mistake—that number belongs to *Wye* Comet, as he is registered in the Herd-Book.

Crops in Connecticut.—Extract from a letter from H. Watson, Esq., dated East Windsor Hill, July 21st:—"My tobacco crops look well. Our wheat crop is a good one—it succeeds better after tobacco than after any other crop; and we have *proved* here, that tobacco does not exhaust the land as much as corn, for on land every way manured and cultivated alike, a much greater crop of wheat is obtained from the tobacco land than from the corn land, in the same field, and side by side."

Crops on Long Island.—Extract from a letter from Albert G. Carl, Esq., dated Queen's Co., July 16th, 1846. "Our wheat and rye is all in sheaf or stack, and is a fine crop. We are yet in the midst of hay, and that too is a heavy crop. Although the drought of last season injured the roots of grass considerably, yet the fine season of this year has made it more than an average. It was noticed early in the spring, that there was much sorrel in fields, more than usual; was it caused by the absence of grass roots, killed by the dry weather of last year?

"Oats are very large, and promise to be a great yield; they are getting ripe, and will, in a day or two, need to be cut. The weather was wet for some two weeks in June, and the first one of July, so that we could not commence haying as soon as usual or desirable, and have had busy times since. Corn, perhaps, never looked better; it is very forward, and in a most growing state, just setting for ears; there are no poor fields of it to be seen. Buckwheat is sown, and has a good start.

"So far, our farmers do not complain of any crops. The rot in the potato has commenced in fields of those planted early, and we fear will be extensive. There is a fine prospect for fruit, but the wet weather caused the cherry to rot on the trees. They were very abundant."

CROPS IN GEORGIA.—Extract from a letter received from R. A. BENSON, Esq., of Macon, Ga.: "The crops are very promising. More wheat has been made this year in this state than ever before: fully double what has been made in any previous year."

CROPS IN GENERAL.—*Grass* has generally been over an average crop. In some few cases it has not done much better than last year, but accounts from all directions, with a few exceptions, speak of the crop as being unusually good. *Rye* has given a good yield, and the grain is generally plump and of good quality. *Oats* have not yet (July 22,) been harvested, but the crop looks heavy. In some instances the growth of straw is so rank that it has somewhat fallen down, but we have not seen many cases where the crop appears to be suffering on this account. *Barley*, so far as we have seen, is promising. *Wheat*, taking the whole country together, we venture to say is unusually abundant. It is true, the Hessian fly has committed damage in some districts, but their ravages are quite limited, and from the great west and the far south, we have the unanimous statement of a bountiful harvest. *Indian Corn* is generally promising. Accounts from the south inform us that it never looked better. We have seen a few fields which have been almost entirely destroyed by the wire-worm. This insect has prevailed in uncommon numbers in some neighborhoods and on some kinds of soil, during this season and the last. Oats and barley, as well as old meadows, in some cases have been greatly injured by them. For *Potatoes*, the season may be said to have been so far rather favorable. They have not suffered with drouth, as has been the case for the two previous years But the final condition of the crop cannot yet be ascertained. The malady which for several years has so seriously affected it, may yet make its appearance. Indeed we have already seen its "premonitory symptoms" in a few instances, and have been informed that on Long-Island and in some parts of New-Jersey, the tubers have even now began to rot. A few days more will probably show with some certainty what we may expect in the case.

☞ We saw lately some very superior **DORKING FOWLS**, and some **RABBITS** of extraordinary size, which had just arrived from England, and were on their way to the country seat of FRS. ROTCH, Esq., at Butternuts, Otsego county. The rabbits weigh, it is said, when full grown, from 14 to 16 lbs. each, dressed, and are highly esteemed for the quality of their flesh. We are pleased to learn, that Mr. R., with his family, have returned to this country, after an absence of several years in Europe.

HEREFORD CATTLE FOR VERMONT.—Rev. L. G. BINGHAM, of Williston, Vt., has lately purchased of Messrs. CORNING & SOTHAM, some fine Hereford cattle. The lot consisted of the imported cow, *Aston Beauty*, two yearling heifers, a yearling bull, and heifer calf. They are animals of excellent qualities, and, we think, will prove particularly valuable to that section of country. Their vigorous constitutions will adopt them to the climate; and on the sweet pastures of the hills and mountains, they will easily and quickly thrive and fatten, while in any fair trials in the yoke, or for the production of butter, they will not be "found wanting."

DURHAM CATTLE.—Among our advertisements will be found that of PAOLI LATHROP, Esq., of South Hadley, Mass., offering for sale his herd of Durham cattle. We have seen some good animals belonging to Mr. L., and we believe the herd is generally reputed one of the best in the country.

FINE CHERRIES.—We were presented, the first of last month, with some very superior cherries, from the garden of Messrs. McCULLOCH & KIRTLAND, of Greenbush. We think they were of the variety described by Mr. DOWNING as the *Bigarreau*, though they had been procured under the name of *White Tartarian*. Their size was greater than any we have before seen, and their flavor and appearance corresponds with Mr. DOWNING'S description, as follows: "Flesh pale yellow, quite firm, juicy, with a rich, sweet, and delicious flavor if allowed fully to ripen. In perfection the last of June."

MR. NORTON'S ANALYSIS OF OATS.—Some months since we noticed the fact, that the Highland Society of Scotland had awarded a premium of fifty sovereigns to our fellow-countryman Mr. JOHN P. NORTON, for a chemical inquiry into the nature and composition of the oat. The society's journal for July, contains Mr. NORTON'S report on this subject. The late period at which it was received precludes a lengthened notice at this time, but we shall endeavor to present an abstract of it in our next.

☞ The **EARLY POTATOES** advertised by E. COMSTOCK & Co., are of the kind we have before spoken of in several instances. We deem them the most valuable early variety we have ever known. Their growth is remarkably rapid—making a strong, healthy vine—and the tuber is decidedly more farinaceous and palatable than any other kind known to us which ripens so early. We had them on our table of fine size and quality this season, the 25th of June.

GENESEE AGRICULTURAL SCHOOL.—We are well pleased to learn that this institution has been patronised so far to an extent even greater than was anticipated. General HARMON, who, it will probably be recollected, is associated with Dr. LEE in the management of this school, writes as follows to a gentleman of this city:—"We have had as many boys at our agricultural school as we could accommodate. I have added a few more rooms, which have made accommodations for ten more."

HAY-SPREADING MACHINE.—We are obliged to our correspondent, C. B., for his suggestions in regard to this implement; but if he will turn to our last volume, page 190, he will find a cut and description of one which we think gives a correct idea of its construction and uses.

NATIONAL FAIR.—ADRIAN BERGEN, of New Utrecht, L. I., writes; "In attending the National Fair at Washington, I was much gratified to witness the improvements our country has gained within a few years, in manufactures, and in improvements of all kinds: and if our nation remains prosperous, we shall still continue to advance, only let our young men labor with their own hands, and not think it beneath their dignity."

CORN AND COB MEAL.—SAMUEL TEAGUE, near Dayton, Ohio, informs us that he fattened his hogs last fall, on corn-and-cob meal made into mush by steam, and that he intends feeding about one hundred hogs in the same way the present season. He thinks he saved one-half of the grain by this mode. We are fully of the opinion that the saving by cooking meal for hogs is very great. As to the use of the cobs, we have not had the opportunity of testing them very thoroughly, but incline to the belief, that where the meal is thoroughly cooked, they would be of less value, particularly for hogs. We suppose, however, that cattle, and perhaps hogs, may obtain some nourishment from cobs, when properly prepared, but we suppose the chief value of cobs consists in rendering the meal more light and bulky, when they are worked up with the grain, by which the meal is more thoroughly acted on by the juices of the stomach, and consequently more perfectly digested.

Multicole Rye.—Messrs. McCulloch & Kirtland, of Greenbush, have raised a small lot of this kind of grain the present season, being the first we have ever seen growing. The crop had the appearance of being decidedly the heaviest which has ever come under our notice, though the soil from its compact and rather cold nature, did not seem to be very well adapted to the production of rye. A portion, only, of the crop has yet been got out, but we have no doubt that when the yield shall have been ascertained, it will be found an extraordinary one. By reference to our advertising columns, it will be seen that E. Comstock & Co. have this kind of grain for sale.

Samples of Wool.—The great number of letters we receive, enclosing samples of wool, precludes the possibility of noticing them at length. We have some very fine samples from Messrs. Perkins & Brown, of Akron, Ohio, showing the condition in which, (as it is stated) they always put their wool for market. It is most beautifully clean, and we should be pleased to learn the particular manner in which it was prepared. Messrs. P. & B. state, that "such wool, in similar condition, has been worth in cash, at Lowell, Northampton, and Webster, Mass., an average of full 70 cents per pound, for the last ten years." The samples sent are said to be from fleeces "each and every one of which weighed from 3¼ to 3¾ lbs."

We have also received samples of wool from the flocks of Ebenezer Bridge, Pomfret, Vt., and B H. Streeter, Berlin, N. Y., who have no doubt good sheep.

CONDENSED CORRESPONDENCE.

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PROFIT OF HENS.

J. H. Austin, Canton, Ct., sends us an account of the profits of keeping fifteen hens for the year 1845. He fed them a quart of corn per day, and "occasionally a few boiled potatoes; also kept a supply of clam and oyster-shells pounded for them to eat. He charges the corn at 75 cents per bushel. The profits, according to his statement, are shown by the following summary:—

Sold 102 dozen eggs at 12½ cents,…………	$12.75
30 dozen, family use, &c.,…………………	3.75
75 chickens at 1s. each,……………………	12.50
	$29.00
Deduct expenses and trouble,……………	9.00
Nett amount,………………………………	$20.00

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BORING FOR WATER.

In answer to the inquiry of C. Bryant, Esq., in the April number of the Cultivator, Mr. Levi Disbrow, writes us that there would be no difficulty in obtaining water by boring in the situation described, providing it is undertaken by those who "understand it," and for those who are "able to foot the bills." He says, "it will prove valuable in towns and among wealthy people, but not in other situations." Mr. Disbrow has been many years engaged in boring for water; he was in fact, we believe, the first to bring that mode of obtaining water particularly into notice in this country. He states that he was the first to adopt the mode of *tight tubing*. He states that the boring at the large brewery in this city, which belonged to the late firm of Boyd & McCulloch, was done by him; that he there used for the first time, a tube to follow as fast as the boring was done, previous to which there is no accounts of any thing of the kind being used in Artesian wells. He states, that the tight tubing is the only mode by which a well can be sunk through quick-sands, or where it is necessary to shut off fresh water from salt, or salt from fresh, as is the case at Syracuse and Salina, and in cities and towns along the seacoast. Mr. Disbrow is at present engaged in boring for water at Little Sodus, Wayne county, and would be glad to hear further from Mr. Bryant.

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MUCK AS A FERTILIZER.

Mr. Storrs Barrows, of South Trenton, N. Y., thinks our correspondent at Castleton, Vt., is wrong in the statement that muck "in its crude state is almost valueless as a manure." (See June No. p. 192.) After having used it in various ways, Mr. B. says he is decidedly in favor of hauling it from the swamp in the autumn, and spreading it evenly over the meadow. He thinks the "extra expense of composting with barnyard dung is not sufficient to warrant the practice."

We have often remarked that there is a great difference in the value of "muck" as manure. Its composition is various. That which has assumed the form of *peat*, usually requires a process of preparation to fit it to nourish plants. It is frequently formed in a great degree of mosses, which in the course of time, have grown and perished—each succeeding crop increasing by its decay the accumulation of the mass. Peat usually contains in a greater or less proportion substances which are prejudicial to vegetation, particularly tannin and gallic acid, and it is necessary that these should be driven away, or rendered harmless, before the peat can yield its fertilizing properties to vegetation. On the other hand, the muck which is formed by the decay of the leaves of trees, (especially those of hard wood,) mixed, as is often the case, with the wash of surrounding lands, is a different substance, does not contain the acids just mentioned, or only in a slight degree, and is at once capable of nourishing crops.

NEW PUBLICATIONS.

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Farmer's Library and Monthly Journal.—This work was commenced in the city of New-York, in July, 1845. It is issued monthly, each number containing about one hundred pages. The design is to afford a Journal of Agriculture, and also to republish standard foreign works. The first half of each number is therefore devoted to the latter purpose, and the other part to miscellaneous agricultural intelligence. But we have so often spoken of the Farmer's Library before, that there seems not now to be any necessity of describing it in detail. We have just received the entire work for the first year, consisting of two beautifully printed and substantially bound octavo volumes of 550 pages each. Of the republished works, we have Petzholdt's Agricultural Chemistry and Thaer's Principles of Agriculture, which comprise one volume of the Library. The Journal of Agriculture consists of original contributions from eminent practical farmers of this country, with similar communications from Europe, prize essays on various subjects, written in this and other countries, and numerous articles from the pen of the spirited and classical Editor, with notices of eminent patrons and improvers of agriculture, accompanied by well executed portraits and biographical sketches. Among others, we are presented in the first volume with the portrait of the late Hon. Stephen Van Rensselaer, of this city, and that of Judge Richard Peters, of Pennsylvania. It is announced that a portrait on steel of the late James Wadsworth, Esq., of Geneseo, is ready and will shortly appear in the current volume. The work is interspersed with other engravings and wood-cuts, illustrative of various subjects connected with its design; such as improved implements, plans for farm-buildings, animals, &c. The work is "got up" in the very best style in every respect, and is afforded at a very moderate price—the two volumes we have described, being sold at only $2.50 each. It is edited by that veteran in agricultural literature, John S. Skinner, Esq., and published by Greely & McElrath, Tribune Buildings, New-York.

☞ The first number of the Farmer's Library the second volume is before us. It commences with the republication of **Stephen's Book of the Farm**, an elaborate work, originally published in Scotland, and which has been highly commended in that country and England. The republication will be continued till the work is finished. The **Journal** department will be conducted as heretofore. We invite the attention of the public to this work. $5 per year.

American Journal of Science and Art.—The July number of this capital work is received. Among the contents, which are varied and valuable, we have read with interest the articles on the Ethnography and Archæology of the American Aborigines, by S. G. **Morton**; on the Evidence of Fossil Footprints of a Quadruped allied to the Cheirotherium, in the Coal Strata of Pennsylvania, by **Chas. Lyell**, Esq.; on the Physical Structure of Plants, by Dr. D. P. **Gardner**; Facts relating to the Great Lakes, by Prof. C. **Dewey**, &c. We have also been interested by a communication on the Zeuglodon Remains of Alabama, by S. B. **Buckley**. As it had been conclusively proved that the bones of the Zeuglodon, which Mr. Koch exhibited in New-York and elsewhere, under the name of *Hydrarchos*, belonged to different individuals, some might be induced to doubt whether the skeleton of the Zeuglodon which Mr. **Buckley** obtained in Alabama, now in possession of Prof. **Emmons** of this city, really belonged to one animal. Mr. **Buckley's** communication is directed chiefly to this point, in reference to which he gives a detailed and authentic account of the manner in which this skeleton was procured, clearly proving that all the bones belonged to one individual. The Journal is published by Messrs. **Silliman & Dana**, at New-Haven, on the first day of every second month—$5 per year.

Doctor Lardner's Lectures.—We have received the Fourteenth Number, which completes the series, and contains the title-pages, indexes, &c., for both volumes. The publishers state that the complete series are now printed in two large octavo volumes, and neatly and substantially bound in muslin and sold at $4.50. We do not know how so much valuable knowledge can be purchased in any other way at so cheap a rate. Published by **Greely & McElrath**, Tribune Buildings, New-York.

The Son of Temperance and Rechabite.—This is a work just commenced in this city, devoted to the promotion of temperance under the auspices of the Orders of the Sons of Temperance and Rechabites. The first number makes a very pretty appearance, forming a magazine of forty pages, octavo. It is to be issued monthly, at $1 per year. Edited by J. **Stanley Smith**, (late editor of the Albany Citizen,) and published by **John Tanner**. As an instrument of good, we wish the work success.

FOREIGN.

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We have, by the Cambria, our English and Scotch papers to the 1st of July. The new Corn and Tariff bills passed the House of Lords, and became a law on the 25th of June. Shortly after this event, Sir **Robert Peel** tendered his resignation to the Queen, which was accepted. Lord **John Russell** has been appointed in his place, and has formed a cabinet, which have assumed the duties of the government. The prospect is highly flattering for an early and abundant harvest. The season had been uncommonly warm, with timely rains, and all crops have flourished well. There is, as yet, little or no complaint of the potato disease either in Great Britain or Ireland. Flour and grain is abundant in the English markets, and was being rapidly released from bond, under the nominal duty of four shillings per quarter. Cotton had slightly advanced in price. American provisions were plenty in the principal ports.

A paper of later date, received by the Great Britain, speaks of the decline in prices of breadstuffs as follows:

We noticed in our last the immense quantities of flour [illegible] wheat which had been released from bond when the new act came into operation. Flour, in consequence, has declined to the extent of 6s. a barrel, and wheat nearly 10s. a quarter. Every one anticipated a serious reduction, but the fall has fully equalled the worst apprehensions of importers. Every day brings vessels from Canada and the U. States, laden with flour, which has been shipped in anticipation of better prices, the fall of which, on the eve of a prolific harvest, will prove quite as injurious to the British farmer as to the American exporter."

PRICES OF AGRICULTURAL PRODUCTS.

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New-York, July 22, 1846.

COTTON—New Orleans and Alabama per lb., 7½a10c.—Florida, 7½a9½—Upland, 7a9 cts.

BUTTER—Prime, per lb, 16a18c.—Common, 6a7.

CHEESE—Per lb., 6a7c.

FLOUR—Genesee, per bbl., $4.12½a$4.18¾—Michigan, and Ohio, $4a$4.06.

GRAIN—Wheat per bushel, 82a86 c.—Rye, 62½a64 c.—Corn, Northern, 53a53½c —Barley, 45.—Oats, 35

HEMP—Russia, clean, per ton, $215a$225—American water-rotted, $130a$180.

HAMS—Smoked, per lb., 5½a7 cts.

BEEF—Mess, per bbl., $6.50a$7.

LARD—Per lb. 5¾a6c.

PORK—Mess, per bbl., $9.56¼—prime, $7.87.

TOBACCO—Connecticut seed leaf, per lb, 3½a8½.

WOOL—(Boston prices.) July 18:

Prime or Saxon fleeces, washed per lb.	38a40	cts.
American full blood fleeces,	31a35	"
" three-fourths blood fleeces,	28a31	"
" half blood do	25a28	"
" one-fourth blood and common,	21a24	"

CATTLE MARKET—Brighton, July 20—At market, 465 beef cattle, 10 yokes working oxen, 40 cows and calves, 2250 sheep, and swine none at market. Beef cattle, extra $6, first quality, $5.50, second do. $5, third do. from $4 to 4.75. Working oxen—Sales were made at $72. $78, $85 and $102. Cows and calves—Sales at $23, $26, $29, $34 and $42.50. Sheep—Dull sales of lots at $1.25, $1.37, $1.66, $1 75 and $2.63. No swine in market.

N. B Cattle very poor in quality at market to-day, but most of them sold—say 50 head left over.

PRINCE'S PREMIUM STRAWBERRIES.

William R. Prince & Co., Flushing.

HAVING devoted great attention to this Fruit, now offer the most estimable collection existing in America or Europe, embracing all the choicest varieties recommended by the London Horticultural Society, and the most estimable of other countries, including several splendid seedlings, originated by themselves and others. The sexuality of every variety has been investigated, and such plants and directions will be furnished as will insure abundant crops. There is no such thing as strawberries becoming barren when properly managed; they can be transplanted from August to November.

Primordian, the finest and most productive early crimson variety, large, profuse bearer, one of our seedlings, and now first offered, $3 per dozen.

Large Early Scarlet. $1 per 100.

Garnestone Scarlet, $1 for 25, and $2 per 100.

Crimson Pine, large, fine, and prolific, another of our new seedlings, $2 per doz. and $3 for 25.

Crimson Cone, one of the most splendid, large, bright crimson, high flavor, profuse bearer, unrivalled, $3 for 50, and $5 per 100.

Prince Albert, (true sort,) Coul Late Scarlet, Iowa, and Willay, $1 per dozen, and $2 per 50.

Alice Maude, Deptford Pine, Corse's Seedling, Boston Pine, and Buist's Prize, $1 50 per dozen.

President and Clara Victoria, $3 for six.

Swainstone, Black Roseberry, and Victoria, $1 for 25, and $2 per 100.

British Queen, Myatt's Eliza, Myatt's Pine, Elton, and Old Pine, all fine flavor, but poor bearers, $1 for 25, and $2 to $3 per 100.

Hovey's Seedling, Bishop's Orange, Ross Phœnix or Keen's Seedling, and Roseberry, 50 cents for 25, and $1.50 per 100.

Dundee, Hudson's Bay, and Methven, $1 per 100.

Royal Scarlet, Old Scarlet, Melon, and Downton, moderate bearers, 50 cts. for 25, and $1 per 100.

Hudson, (of Cincinnati,) great bearer, $1 for 25, and 2.50 per 100.

Prolific, Large Flat, and Green Hautbois, $1 for 25, and $2 per 100.

White and Red Running Alpine Everbearing. $1 for 50, and White and Red Bush, do., $1 for 25.

Common English Red Wood, (erroneously called Stoddard's Washington Alpine,) $1 per 100.

English White wood, $1 per 100.

Very large quantities at a reduction. Orders not less than $5, (cash enclosed,) will meet prompt attention.

N. B.—All orders must be sent direct to us, and no plants are from us unless our printed bill and signature accompany them.

Flushing, Aug. 1. 1846—2t.

MULTICOLE RYE.

THE subscribers will be prepared to fill orders for the Multicole Rye, to a small amount, for sowing this autumn. This Rye has thus far produced abundantly, and promises to be a valuable variety. It requires no more than three pecks of seed per acre, and is highly recommended to those who wish to sow for soiling, as it grows very rapidly, and may be cut early in the spring.

E. COMSTOCK & Co.,
August 1. Albany Ag. Warehouse.

DURHAM CATTLE FOR SALE.

THE subscriber being about to make new arrangemonts in his business, offers for sale his entire stock of thorough bred Durham Cattle, (25 in number,) of unquestioned pedigree, for which see American Herd Book. This herd has been selected and bred with great care, and with particular reference to their dairy properties. They have descended from the most celebrated herds in England, and are unquestionably one of the most valuable in this country. Any inquiries by mail promptly answered by the subscriber. PAOLI LATHROP.

South Hadley Falls, Mass, Aug. 1, 1846.—2t.

STRAWBERRY PLANTS.

THE subscriber has for sale, at his garden in Albany, the following kinds of strawberries, viz: Elton Pine, Iowa, Myatt's Eliza, Princess Royal, Stoddard's New Seedling Alpine, Victoria, Swainstone's Seedling, and British Queen; all rare and highly esteemed varieties, at *fifty cents per dozen*, or twelve dozen for $5, packing included. Also Bishop's Orange and Early Scarlet, at $1 per hundred; Ross' Phœnix and Hovey's Seedling, at $2 per hundred. AMES WILSON.

Albany, Aug 1—1t.

FRUIT TREES, ORNAMENTAL TREES, SHRUBS, PLANTS, &c.

THE subscribers have in progress arrangements for furnishing hereafter every description of Fruit and Ornamental Trees, &c., which, when completed, will enable them to forward to their customers in all parts of the country, every variety of choice Fruit Trees, Forest, and Ornamental Trees, Shrubs, Plants &c., from the best nurseries in this country. They solicit orders from their friends and all in want of the above articles. Our central location and acquaintance with most of the nurserymen will enable us to meet the wants of all. When our arrangements are fully made, further and more particular notice will be given. In the mean time we shall be happy to receive orders from those in want of trees for setting out the ensuing autumn. Strawberry plants from one to four dollars per hundred. E. COMSTOCK & Co.

Albany Ag. Warehouse, No. 10 Maiden Lane, and 23 Dean-st.
Aug. 1, 1846.

A FARM FOR SALE.

SITUATED in Florence, Erie Co O., containing 50 acres of good land, suitably proportioned in meadow, plow, pasture and woodland. On the premises is a good dwelling house and a small barn, a thrifty bearing apple orchard, with a variety of other fruit trees. Said farm is 3½ miles from Lake Erie, and is contiguous to good markets, churches, and schools. Any inquiry may be made by letter, post-paid, to H DEAN, No. 135 Bridge-st., Brooklyn, N. Y., or of KNEELAND TODD, on the premises. Price, $1,100.

August 1—2t*

MACHINE BELTING.

THE subscriber having completed arrangements, is now prepared to furnish the common Leather Banding. Also the superior patent Cemented and Riveted Banding, stretched and reppared by machinery) of any required width, at the lowest rates The banding is warranted to give satisfaction. J. PLANT.

Aug. 1—1t. 5 Burling-Slip, N. Y.

FARM MANAGER.

WANTED, a situation as manager or agent of a large farm or estate, by a farmer who has been educated on the border counties of England and Scotland, and upwards of three years in this country. Apply to S. SANDS,

Ang. 1—1t * Office of the American Farmer.

POTATOES.

TO those who desire choice varieties of potatoes for seed, a favorable opportunity is offered this fall, as we shall be prepared to furnish the following varieties during the season and until too cold for sending abroad, viz:

"Hall's Early June," decidedly the best early potato cultivated, being not only superior for the table, but good yielders and are fit for eating many days before any other kind. The "Carter Potato" for winter and spring, stands deservedly high, and produces better crops than the Pinkeye. The "Prolific Blue" is an abundant yielder, and where potatoes are grown for feeding stock are a valuable variety. All the above sorts will be carefully packed in barrels and shipped to order. E. COMSTOCK & Co-

Aug. 1. Albany Ag. Warehouse.

GRANT'S FAN MILLS.

NO. 1. $21: No 2. $23; No. 3. $25; and No. 4. $27; for sale at the Albany Agricultural Warehouse, 10 Maiden Lane, and 23 Dean-st. E. COMSTOCK & Co.

Aug. 1, 1846.

STRAWBERRY VINES.

HOVEY'S SEEDLING, Virginia Scarlet, Ross Phœnix, Black Hautbois, White Pine, and the Excelsior, the latter a new and superior variety, and an extraordinary bearer—for sale by the subscriber, at his nursery in Albany. Vines forwarded to any part of the country with promptness. Orders left with E. Comstock & Co., of the Agricultural Warehouse, in this city, will be received. J. A. KANOUSE.

Albany, Aug. 1—1t.

KENDALL'S CYLINDER CHURNS.

THE following in relation to the above churns, from a firm in Vermont, who purchase of us, will show in what estimation the cylinder churns are held.

"We wrote you a few days since, to forward three each of the two smallest size churns. Please send us immediately six each of three sizes. Churns are getting in good demand. Our people think there is quite a saving when they can fetch the butter in two minutes, instead of churning two hours with the old fashioned churn. The Kendall churn is getting to be all the go."

The above churns are always for sale at wholesale or retail, at the Albany Agricultural Warehouse, No. 10 Maiden Lane, and 23 Dean-st. E. COMSTOCK & Co.

Aug. 1, 1846.

KELSEY'S ALTERNATING BEE HIVE,

Patented May 9, 1846.

ENTIRELY NEW PRINCIPLE IN THE MANAGEMENT OF BEES.

THESE hives, the only ones of real value and utility to farmers and others engaged in the culture of bees, now before the public, are constructed upon *natural principles*, and combine the following advantages: The bees are easily hived in them—it never becomes necessary to kill off the swarms; honey can at all times be taken away when it can be spared by the swarms, or more can be added for the sustenance of late ones; young swarms can be taken away at the proper periods, and put into other hives, where they go to work without the trouble of swarming or hiving, while the main swarms are never disturbed in their operations. The swarms are entirely protected from robbery by neighboring bees, and from mice and insects; they can be handled with perfect safety, and always living and breeding in new honey comb, are kept entirely healthy, and young swarms are always fully developed.

The eggs or embryo of the bee moth, or miller, cannot hatch or mature around these hives, and therefore the bees are *entirely protected* from the ravages of that destructive enemy, while the alternating principle is such that the bees are kept industrious the whole season through, by always having plenty of room to work in. Old honey comb cannot accumulate, nor will the bees "run out" or "die off" in these hives.

They have been fully tested by actual use, by over *three hundred* extensive bee culturists, under the direction of the inventor, and all the swarms are now and will remain as good as new and young swarms

Ample directions accompany each hive, giving full instructions for the management of bees, which are so simple that any person with ordinary capacity and attention cannot fail to be successful in their management and culture.

They are sold very cheap, and all farmers or other persons who keep bees, or wish to enter into that profitable culture, will find these hives all that can be desired, and are invited to call at the American Institute, and S. Mitchell's, 34 Bank-st. N. Y. city; L. Freeman's, Bergen, N. J.; Bedell's Temperance House, Syracuse; A. Young, Geneva, N. Y; W. Sago's, Watertown, N. Y., where they can be found and examined.

Applications for exclusive rights to make and use them in any part of the Union, must be directed to W. R. KELSEY, Starkey Yates Co., N. Y.

Single Hives, with individual rights, can be had by applying to the subscriber, or his agent, who will furnish each purchaser with a right signed by the patentee. W. R. KELSEY, Patentee.

Aug. 1, 1846—4t.

An Agent wanted for Albany and adjoining counties. Good terms given.

WIRE CLOTH SEIVE AND SCREEN MANUFACTORY.

THE subscriber has constantly on hand a large assortment of the above articles, which he offers at the lowest mark prices. D. L. CLAWSON.

July, 1846—10 mos. 191 Water-st., New-York.

P. S.—All kinds of wire work manufactured to order.

WOOL.

LIBERAL advances will be made by the subscriber upon woo consigned for sale, or shipment to England.

HAMILTON GAY,
July 1—3t. 53 South-street, New-York.

SEED WHEAT.

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MR. HORSFORD'S LETTERS.—NO. XIII.

……

Giessen, May 1, 1846.

Mr. Tucker—I am quite satisfied of two advantages possessed by the wine-growing countries of Europe over the lands of our northern states, in relation to the culture of the grape.

One is, the great surplus of labor here permitting an amount of care and cultivation, which, with existing wine prices, could not be afforded by agriculturists in general in our country.

Another is palpable from the fact that the first frost in this region of country occurred on the 15th of October. The weather of the summer season is remarkably uniform—not surpassingly fine, nor yet of the worst kind—but free from sudden and extreme changes.

Of the first reason; In Nov., 1844, I saw peasants carrying hods of earth up the steeps of the Rhine vintage to manure the soil about the roots of the vines. The amount of this labor, when it is remembered that square miles by the thousand are to be enriched in this way, and that each root is not more than a foot and a half perhaps in either direction from its fellow, is immense. Early in April of last year, I saw them at work removing the leaves and rubbish, tieing the vines to the stakes, and preparing them to take advantage of the genial influences of spring. Through the whole summer season, every walk past vintages, found some kind of labor going forward. In September the outer branches were cropped, to throw the flood of sap into the fruit. In October and November, the grapes were gathered, juice expressed, and disposed in casks for fermentation.

The labor bestowed upon this single department of agriculture has vastly exceeded all I had conceived.

Of the second reason; notwithstanding the long postponement of frost, it is computed that but one year in five can be calculated upon as fruitful. If with this uncertainty, one chance in five, the peasantry, accustomed to the simplest fare, can barely live, how could the effort to cultivate extensively be profitable with us, where the chances of success are so reduced by the contingencies of sunshine and rain, and where labor is so expensive?

How the effort may be rewarded in the states farther south, I am unable to say. Perhaps upon the eastern and southern slopes of hills in some parts of Virginia, the climate would not be objectionable.

Respectfully yours,
E. N. Horsford.

CONNECTION OF CHEMISTRY WITH AGRICULTURE

……

Mr. Tucker—I have been greatly pleased by the perusal of a lecture, which I find in a foreign periodical, delivered by J. C. Nesbit, Esq., before the Agricultural and Scientific Training School, at Lambeth, near London. The subject of the lecture was Oxygen, its properties, &c.; and so clearly and happily was it illustrated, that I have transcribed the following extracts, and am induced to offer them to you for insertion in the Cultivator, hoping that some of your readers may find their perusal equally as interesting as they have been to me.
J. C. S.

……

Oxygen is found in the greatest abundance through the whole of this planet. It it is found in the air, in the water, in the clouds, in the earth, and in minerals of every variety. It forms a considerable portion of all sand-stones, and clays, and oxides (or rusts) of iron. The fact is, all the oxides or rusts are merely combinations of this substance with different bases or metals; and its very presence in such quantities throughout all nature, will sufficiently show the importance of its action. The affinities of oxygen for other bodies are more powerful, perhaps, than those of any element we know; of its action we shall have occasion to speak as we proceed.

The air contains one-fifth of its bulk of oxygen, which in that case, assumes the character of a gas; every five bushels of common air contain one bushel of oxygen. Oxygen, as a gas, is carried round the world, and penetrates every part; and the substances which require it are always sure to find something from which they can abstract it. Water, which is the next universally extended medium, contains a large quantity of oxygen; every nine tons of water contain eight tons of oxygen—not as a gas, but as a liquid; and in this way it is also disseminated over the world. In the generality of earthy matters, from one-third to one-half is composed of oxygen,

Oxygen gas is also given out in nature, from the decomposition of some of its combinations. The vegetable world is the great source of oxygen. Vegetables possess the power of decomposing two compounds of oxygen, *carbonic acid* and *water*, and of retaining the carbon of the one, and the hydrogen of the other, to form their own tissues. This operation, however, only goes on in the light of the sun, or in the effulgence of day. The process is this: Plants have roots and leaves. By the roots they take up moisture from the soil, and in this moisture are dissolved those substances which plants require for their subsistence. To form the organized parts of plants, however, it is necessary to have the assistance of the leaves, through the vessels of which the juices of plants must always pass, before they become converted into the substance of the plant. The leaves of plants have a peculiar function, namely, that of separating the carbonic acid from the other constituents of the atmosphere, of retaining the carbon of this carbonic acid, and setting its other ingredient, the oxygen, free. After the sap has thus been mixed in the leaves, with the carbon which the leaves derive from the atmosphere, it goes to increase the growth of the plant. The water taken up by the root undergoes a somewhat similar decomposition, its hydrogen being retained and its oxygen liberated.

In some of the products of plants, such as turpentine, all the oxygen of the water and carbonic acid have been liberated.

Oxygen is chiefly remarkable as a most powerful supporter of combustion; it is the substance which in natural operations, consumes and burns up all vegetable and animal matter. It is this oxygen which, by its action upon the carbon and hydrogen of our wood, coal, oil, &c., produces that light and heat which we feel to be so necessary. It is oxygen which causes this candle to burn at the present moment; if deprived of oxygen it would be extinguished; but if the supply be augmented its brilliancy will be much increased. I will immerse the lighted candle in this jar of oxygen. In a moment you see the flame becomes brilliant, and burns with so much splendor as to dazzle the eyes.

A similar increase in the intensity of the action is seen, when other combustible substances, such as sulphur and phosphorus, previously ignited in the air, are brought into contact with pure oxygen gas.

Iron, zinc, and other metals will burn in oxygen with great ease, as I shall have occasion to show you towards the close of the lecture. It will not be difficult for you to understand why chemical action or combustion should be so much more intense in pure oxygen than in air. In the pure oxygen there is nothing to prevent the intimate contact of the two bodies which are uniting with one another, that is, the burning body and the oxygen; and as fast as one portion of oxygen has acted on the combustible body, its place is supplied by another portion, which in its turn will be wholly expended on the burning body. In common air this is different. Before the combustible body can be acted upon by one cubic inch of oxygen, five cubic inches of the atmosphere must be presented to it, which of course will take up five times the time. But the four cubic inches of nitrogen have also the effect of cooling the burning body in passing through the flame with the oxygen. The amount of light and heat produced depends on the quantity of chemical action which takes place in a given time. It is quite evident that the greatest action in the least time will take place with the pure materials. If we, by any artificial means, can contrive to make common air pass in large quantities through the interstices of combustible bodies, as charcoal, coal, &c., previously in a state of ignition, we shall in a measure increase the action as if we employed pure oxygen, because we shall cause a greater action in a given period of time.

It must now be apparent to all of you that the more oxygen we can get through a common fire place, or the more that can be brought in contact with the fuel in a given time, the greater will be the combustion, and the greater the heat. In the open air coals burn dull, and do not give out much heat or light in a given time. If coals be put in a fire place, more air gets through them in a given time, and a great heat will be produced; but then the coals will burn sooner. If you want to get more heat you must enclose the coals in a furnace connected with a high chimney, so that all the air is obliged to pass into the furnace through the bars at the bottom. You will thus have in the chimney a column of hot air, which is lighter than cold air. The cold heavy air will therefore force upwards the light air of the chimney and endeavor to supply its place; and as the air can only get into the chimney by passing through the furnace, a large quantity of oxygen is in this way supplied to the fuel in a short time. But though you get more heat in a given time, you consume more coals. I will give you another instance: The common blacksmith's forge, where, I have no doubt, you have often seen the workmen blow the bellows till they were almost tired. The object is to send a greater amount of air, (that is to say, to send more oxygen) among the coals, and by this means to produce a greater amount of heat in a given time; but in proportion to the rapid production of this heat will be the quantity of coals consumed. Now there is one fact in connection with this which you will do well to note. A pound of charcoal, in uniting with oxygen, gives out always the same *amount* of heat whether burnt quickly or slowly; and the same may be said of hydrogen and other combustibles; and whether the union be quick or slow, or whether a given amount of fuel be consumed in five minutes or five hours, the sum total of heat evolved will be the same. But it is evident that if the fuel be wholly consumed in five minutes, the heat in this case will be very intense during its short continuance; but if it last five hours, the heat will not be intense, but low and continuous.

Now, wherever oxygen is absorbed, that is, when it comes into union with another substance, heat is given out. I will give you an instance where common vegetable matter will ignite spontaneously, merely from the fact of its being brought in contact and union with oxygen. If we take a pound or two of cotton, and mix it with linseed oil or olive oil, (the best is boiled linseed oil,) and then lay it in a corner, the mixture will be on fire in twenty-four hours. The cotton exposes a great surface of the oil to the action of the oxygen of the air; and is at the same time from its porous nature, a bad conductor of heat. Very well; the oxygen and oil begin to act on one another; a little of the carbon and hydrogen of the oil is slowly consumed, and a small quantity of heat is generated, which slightly raises the temperature of the whole mass; for the non-conducting nature of the cotton will not allow the heat to escape as it is produced. More oxygen acts on the oil, more heat is given out, and this goes on till the whole gets to a red heat; light is evolved, and the mass is set fire to.

In the north of England, where a deal of oil is used in machinery, and where it is cleaned by waste cotton, many mills were at one time burned down from the cause I have mentioned. The dirty oiled cotton waste was thrown into a corner on Saturday night, and the mill was burned down before Monday; and it was frequently believed to be the work of an incendiary. Persons have been blamed for the crime; while the real cause was that which I am now telling you. The manufacturers are now more cautious, and take care not to allow the oily waste cotton to accumulate.

Agriculturists are liable to accidents of a similar kind. How much money has been lost from the storing of hay in a wet state instead of in a dry! Wet operates like oil; it enables the oxygen to get hold of the woody matter of the hay upon which it does not act in the dry. The hay is stacked in a great hurry, without being properly dried. Being damp and porous, the oxygen is absorbed, and a little heat given out, which cannot readily escape; a little more oxygen is absorbed, and a little more heat given out, till a red heat is attained, and then fire breaks out. Now the difference between the oil and the cotton, and the damp hay is only this; that in the first case the fire breaks out in a few hours, (from twelve to twenty-four will be sufficient,) while in the stack four or five days or weeks may sometimes be required.

I can show you another case. When farmers want to make manure, they heap up great masses of straw, litter, and excrements; and what takes place? It begins to smoke and gets heated. And where does the heat come from; how is it generated? The mass decreases in bulk very much; in eight or ten months it will have diminished at least half. But what is the cause? Don't you see this? The active and energetic oxygen is at work. You have vegetable matter moistened with water, you have oxygen absorbed, and it consumes the dung; but more slowly than in the case of the hay. I told you that hay may take fire in four or five weeks;

but good farmers so manage it that the heat shall not exceed from 80 to 90 degrees. The farmer also wants his dung to decompose mildly and quietly. But what would take place, if, instead of keeping the dung pressed down, he was to separate it, and let the air come in? Practical men will tell you that the heat would be largely increased; instances, indeed have been known of such heaps taking fire. In fact, if these dung-heaps are not properly attended to, they will readily take fire. You see, from this, that oxygen has a deal to do with manure; for it is by this substance that the farmer gets his heaps diminished in bulk. He gets the most worthless portion taken away; that which is left is more easily carted and more valuable. You see, therefore, what an active agent oxygen is. It acts, too, upon all metals exposed to the air. If you take a knife or a spade, and expose it to the action of the air all night, you will find it next morning of a red color. And what is this red substance? It is a compound of oxygen and iron, called the oxide of iron.

There are many other combinations which spontaneously take fire and give out heat from the absorption of oxygen. Iron pyrites, a compound of sulphur and iron, is found in large quantities throughout the globe. It is very bright and metallic, looking something like gold When exposed to air and *moisture*, oxygen is absorbed, which, uniting with the sulphur, forms sulphuric acid, and with the iron, oxide of iron. These two again unite, and form the sulphate of iron, or common green vitriol. As oxygen is absorbed by the pyrites, you are also sure that heat is produced. In the manufacturing districts, where sulphate of iron is largely made from pyrites, care is taken not to allow it to get over-heated: and if it should get too hot, water is thrown upon it. Bishop Watson, the celebrated chemist, tells a curious thing in his chemical essays. A man at Elland, in Yorkshire, collected a quantity of the pyrites, under the idea that it was gold, and put it into his barn in a heap. The barn, as was common enough in those days, was made of wood, and moreover the roof was a little leaky, and by this means rain was introduced. This generated a heat, and in the course of a few weeks, the heap took fire, and burned down the barn. You see, therefore, how important it is that such things should be borne in mind.

There is another thing very closely related to what I have mentioned. Any of you who have been in the north of England, must have seen all round the great coal-pits of Newcastle, Durham, and other places, large heaps of small coals, covering many acres. These coals have been deposited there owing to their small value; and you will find that they are always on fire. Perhaps you will imagine that the coals were set on fire? No such thing; they took fire by themselves. When I state to you that the coal contains sulphuret of iron (iron pyrites,) you will be at no loss to ascertain the cause. The action of oxgen on the sulphuret of iron is such as to produce heat, and the continued action of this heat causes the coal to take fire. Many singular phenomena of which we occasionally hear, as, for instance, smoking and burning cliffs, near the sea, are due to the action of oxygen on recently exposed iron pyrites.

But more still. This oxygen, this universally-acting busybody, has something to do with volcanoes and earthquakes. We find that these volcanoes burst out with tremendous force in some places, emitting large bodies of fire. Whence does this arise? This fire is doubtless the product of combustion. And what an enormous power must be generated to produce such awful results as the overthrowing of Herculaneum and Pompeii, the awful visitation of Calabria, or the destruction of the city of Lisbon.

In connection with Volcanoes it should be borne in mind that they are always near the sea. You know that when you look for their positions on the map, you keep your eye to the coast. Etna, Hecla, Vesuvius, Stromboli, the burning mountains of the Andes, and the volcanoes in the East Indies, are all to be found near the coast. There can be no doubt that water has something to do with them; and water, recollect, contains a great deal of oxygen.

It has been supposed that the matter of the interior of the globe consists chiefly of the metallic bases of the earths; and these, it is well known, have the power to decompose water, uniting with its oxygen and liberating the hydrogen.

Now, if by any means the ocean water penetrates to these metallic bodies, most intense action will be the result; heat will be liberated, and effects produced quite sufficient to account for the phenomena of volcanoes and earthquakes.

There are a few other points which I wish to bring before you. This oxygen is the agent appointed for the destruction of all vegetable and animal substances. Every one of us is undergoing its action. We breathe it, but we return less of it to the air than we took from it. What we inhale produces heat, and this is the reason why your bodies are warmer than the stone walls around you. Without any very great stretch of the imagination, or any very forced comparison, your bodies may be likened to little steam-engines, or blacksmith's fires. Your lungs operate as a pair of bellows, your mouth is the chimney, and the food is the coal. Your bellows are always going; if you are prevented from breathing for two minutes you will die. Yet, if it were not for the action of the oxygen on your body, you could not live; for from its continual consumption of the muscles of the body, you derive your physical energy and power. If you did not eat what would be the consequence? Would the bellows cease to work? No; they would go on working till every particle of available fuel, (flesh, fat, &c.,) was consumed. This shows that if you take no food to supply the waste of the muscles, you must, like a fire, ultimately *go out*. If food be withheld the parts of your body, such as the fat, the muscles of the cheeks, of the breast, and all other available parts, would be consumed by the action of the inspired air, before the bellows would cease to work; and, lastly, the brain would be attacked, and you would die. Now, this always takes place when, by any means, food is not taken, or not properly digested. On the other hand, if the blacksmith overloads his fire, and does not blow his bellows enough, the flame goes out; and you, if you are always eating and never blowing your bellows enough, you are still liable to *go out*. You are putting on too many coals, and that is the reason why I recommend you to enjoy yourselves at play, without which you can never expect to grow strong. Our life, and the life of all animals, therefore, depend on the action of oxygen and the supply of food. When these two are in a state of equilibrium or balance, we are in a state of *health*. When either one or the other are in excess, our normal state of health ceases, and various maladies ensue, which continue until the cause is removed. Eventually, however, the oxygen obtains the mastery, and these bodies of ours, like those of our ancestors, will be overcome by this powerful agent, and their elements will be returned into the great laboratory of nature, to furnish the principles of life and existence to succeeding generations of animated beings.

All vegetable matters undergo a similar change, and they also are eventually decomposed, to furnish again the elements of vegetable life.

All animal and vegetable substances, therefore, unless preserved in some peculiar manner, are resolved into their original elements. But if protected from the action of oxygen, they may be preserved for an indefinite period of time. Wood is painted to preserve it from contact with the oxygen of the air, and it thus lasts much longer. Again, coal is the remains of immense forests of primeval periods, and it has not yet been decomposed into its elements. These immense deposits of vegetable matter were, when deposited, covered with soft mud, so that the oxygen was prevented from coming in contact with them, and by the constantly increasing pressure from superincumbent deposits, the mud became a rock, and the action of the oxygen became less and less for each succeeding year. The con sequence is, the mass has been preserved for an immense period of time.

Animal matter may also be easily preserved out of contact with air. The finest salmon of Scotland, the most excellent soups, game, fowls, and fish of all kinds, are now packed in air-tight tin cases, and can thus be sent to all parts of the world. The travellers across the desert of Suez, in their journey to the East Indies, often enjoy the luxury of *fresh* Scotch salmon.

Oxygen, then, is one of the most important elements that we know; everything else yields to it in importance; it is found to pervade all nature; it is necessary for the existence of animal life, and is an essential of vegetable growth; and in order that you may be able to trace its effects for practical purposes, in the economy of the farm, I have endeavored to explain its properties and action, not only on vegetables and animals, but also on many elementary bodies not directly connected with vegetation.

CHEESE-MAKING.

......

At the present time, it is an object of considerable consequence to the manufacturers of cheese in this country, to produce that which would be approved and meet with a ready sale in the English markets, whither a large quantity of that article is now being sent. One of the most esteemed varieties of English cheese, is that made in Cheshire; and, having had frequent inquiries in regard to the process of manufacturing this kind, from those who are desirous of imitating it, we give from the Journal of the Royal Agricultural Society, a brief sketch of a prize essay, by Mr. White, on Cheese-Making in Cheshire.

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The number of cows belonging to a cheese-dairy, is stated to be seldom less than 8 or 10, or more than 70 or 80. From 18 cows, a cheese from 36 to 54 lbs. weight, is made daily for four or five months in the summer. The annual produce, however, varies with the cows and mode of keeping, and it is observed that *great loss is known to have been sustained by not feeding the animals well in winter.*

The milking is performed in cow-houses all the year, and it is usual to have a milker to every six or seven cows. The milk of newly calved cows is not mixed with that of other cows till four or five days after calving.

The evening's milk is seldom made into cheese till the following morning, and in small dairies, sometimes not till the second morning. A cool milk-house is necessary, and hence it is commonly placed on the side of the house (or other building) least exposed to the sun. Most milk-rooms have lattice or wire-windows for the circulation of air, and an inclination is given to the floors for the free escape of the cold water which is daily applied to them in summer. Precautions of this kind are necessary to prevent the milk from becoming sour. A temperature of fifty degrees Fahrenheit is thought the best throughout the year.

The dairy is generally near the milk-house, and fitted with two boilers; one for scalding whey, and another of less size for heating water. The salting and drying house should adjoin the dairy. Here the cheeses are placed on stone or wooden benches, salted externally, and dried, before removal to the cheese room. Some dairy-maids dispense with external salting. Sometimes the cheese-room is over the dairy, and at others it is over the kitchen, or other apartment in which a fire is kept. Light and air are always excluded from it by curtains or shutters; and one reason assigned for the practice, is its tendency to prevent the hurtful effects of the fly. Some ot the larger cheese-rooms are warmed by stoves or hot-air, and in rare instances, from ordinary fire-places built in them.

Process of Cheese-Making.—The extraction of the whey, and salting, occupy from five to seven hours, and it is therefore convenient to commence working in the morning. In this case, the evening's milk is kept over night, and in the morning the cream is skimmed off and a portion of the milk warmed. The warming is effected by means of a brass or tin pan, about twenty inches in diameter, and eight inches deep, in which the milk is floated in the boiler, the water in which has been heated for the purpose. In the early months of the season, so much as half the evening's milk may be heated to a temperature of 100 degrees, a heat seldom exceeded, except with a view of saving trouble in the after process. The cold milk is now poured into the cheese-tub, and the warm added to it. The temperature of the mixture may be about 75 degrees, but in warm weather 70 will be enough. It is, however, becoming the general practice, in summer, not to warm the evening's milk; and in very warm weather, even the temperature of the morning's milk is sometimes reduced. The cream, diluted in about double its quantity of warm or new milk, is next put in. If a small portion of the cream is to be retained for butter, it is thought best to skim it off the whole surface of the cream before diluting, in order to remove froth and bubbles, which are considered prejudicial to the cheese. This leads to the conclusion, that fixed air in the curd is detrimental, and suggests the inquiry whether it might not be better to heat the whole of the evening's milk to the required temperature, than to raise the temperature of a part of it to 100 degrees. The next step is to add the new or morning's milk, which is done by passing it through a seive placed on the cheese-ladder over the cheese-tub. Bubbles seen floating on the surface are skimmed off, and passed through the seive to break them.

An important point now demanding attention, is the proper temperature of the milk when the rennet is put in. Little is known among farmers and dairy-maids as to the precise heat which is best; and it is seldom that the temperature is tested otherwise than by hand. In some dairies in which observations were made, the lowest heat was 77 degrees. Even where what is called cold-cheese, which has a tendency to green-mould, is made, it is not supposed that a temperature is adopted at any season of the year, much under 74° or 75°. The evening's milk being about 75, and the morning's milk from 90 to 95 degrees, the temperature of the whole is found to be from 80 to 85 degrees. The exact heat at which milk ought to be coagulated is a matter of essential importance in cheese-making, and it can only be ascertained by a series of careful and judicious experiments, made by scientific and practical parties.

The rennet or steep is now to be added.* To fix the quantity necessary for coagulating a given quantity of milk is difficult, as maw-skins vary much in quality. In using them two skins are often cut at once. Three square inches taken from the bottom, or strongest part of the one, and one or two inches from the top or weakest part of the other, are generally sufficient for sixty gallons of milk. These pieces are put into a cup containing about half a pint of luke-warm water, with a tea-spoonful of salt, the day before the infusion is required. The water thus impregnated with the maw-skin is passed through a seive into the milk; but the skin itself is usually kept out; the rennet cup is well scalded before being used again. The coloring matter and rennet having been put in, the milk is well stirred and left to coagulate, and the tub is covered up. [It is remarked in a note, that the coloring matter used is Annatto, which gives the cheese an amber or cream-like appearance. It is said to be seldom used when the cheese is intended for the consumption of Cheshire families, as it is known not only that it does not improve the flavor, but that if the quality of the drug, is inferior, or, if there is too much of it used, there is a hazard of the flavor being much deteriorated. One pound of it to a ton of cheese, or half an ounce to seventy-five pounds, is considered a moderate proportion. The coagulation is commonly effected in an hour or an hour and a half. The warmer the milk, or the stronger the rennet, the sooner coagulation ensues; but the curd is tougher and less in quantity; on the contrary, the cooler the milk, or weaker the rennet, the longer the curd is in forming, but it is both more tender and there is more of it. Too much rennet tends to impart an unpleasant flavor or bitterness to the cheese.

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* The following is given as a good recipe for curing maw-skins. Procure fresh skins the year before they are wanted; free them from chyle and every impurity; turn them inside out and salt them lay them one upon another, with salt between, in a deep earthen-ware vessel; cover the whole over with salt, and lay a lid on the top. About a month before using them, take them out and drain the brine from them; then spread them on a table, and powder them on each side with fine salt. In this state they are to be rolled with a paste roller, distended with splints of wood, and hung up to dry.

It may generally be expected that the heat of the curd when formed, will be four or five degrees less than the milk was when the rennet was applied; and the difference, especially in cool weather, should not be greater. To determine when the curd is fit for breaking, requires some practical knowledge. It is usually done by gently pressing the surface of the milk with the back of the hand, or by lifting up the skimming dish, beneath which the curd and whey will distinctly appear, if the coagulation is complete. Another criterion is the color of the whey, which should be pale green.

The breaking and gathering of the curd next engage attention. These operations are performed by the hand and skimming dish, or more commonly the curd-breaker. This implement is made of wire-work, in an oval form, and has a rim of tin round it about an inch and a half broad. It cuts the curd by being passed through it perpendicularly, and at first very, *very* gently in different directions, so that the whole mass is separated into very small portions. For a 60 lb. cheese, this operation takes twenty or twenty-five minutes. The curd is then left for a quarter of an hour to separate from the whey, and if the weather is cool, a cover is put over the tub to retain the heat. After the separation of the curd, which falls to the bottom, a portion of the whey at the top is taken out by the portable brass or tin pan being pressed into it, and emptied into the set-pan; the curd is then gently broken, by being raised with the hands to the surface, or by the renewed use of the curd-breaker. When the curd is brought to the top, it is easily raised and separated into small portions for the release of the whey. This part of the process takes about half an hour. After about another half hour, or as soon as the curd is sufficiently settled, more whey is taken out, and the curd, so far as its contexture will admit, drawn into one-half of the bottom of the tub; a semicircular board is then placed on the curd, loaded with a weight of about 30 lbs. The board is perforated with holes about half an inch in diameter, for the escape of the whey. The tub is now set three or four inches atilt, to facilitate the discharge of the whey from the curd, and the skimming dish is used to lade it out. On its way to the set pan, the whey passes through a sieve in which any curd contained in it is collected. This curd is called slip-curd, and by some dairy-maids is not returned to the tub. The weight and board are shortly removed, and such part of the curd as has been squeezed from under them is again collected on one side, and heavier weight of 50 or 60 lbs. applied as before. As the whey is expelled from the curd it is removed. In a quarter of an hour the board is taken off again, the curd cut by intersections six or eight inches apart, and then the board replaced, doubly loaded. Sometimes the slip-curd is now added, the weight is again increased, if necessary; care being taken to augment the pressure gradually, and to regulate it by the degree of compactness of the curd; for if caution is not used in this respect, both now and afterwards, a considerable portion of butyraceous matter will be forced out to the detriment of the cheese.

The curd is again cut into square pieces, taken out of the cheese-tub, and broken a little by the hands as it is passed into the thrusting tub. Sometimes a large-sized cheese-vat, and at others a willow basket is substituted for the thrusting-tub. In this the further extraction of the whey is continued by the application of the screw, of which there are different kinds, but the principle is the same in all. Preference, however, seems due to the lever press, which possesses the advantage of sinking by its own weight, and of allowing the application gradually of any degree of pressure, with less attention on the part of the dairy-maid.

The proportion of salt is not regulated by any definite rule. One farmer, distinguished for improvements in agriculture, uses one pound to forty-two pounds of curd. In another instance, more salt is used in summer than at other times, the average being one pound for forty pounds of dried cheese, or about forty gallons of milk. In autumn there is always more curd in the milk than at other seasons; and in wet weather there is sometimes an increase of milk without a corresponding augmentation of curd. Before applying the salt, the curd is cut into three or four equal parts, and these are broken into smaller pieces by the hand or by the curd-mill. The salt is then strewed over it, and the breaking continued till the salt is well intermixed, and the curd completely crumbled.

The presses employed, for the two first days at least, and, if possible, during the whole process, should be within the influence of moderate heat; otherwise the the discharge of the whey will be retarded, and greater hazard incurred of the flavor of the cheese being injured by acidity, to which the whey is prone. On the second day after the cheese is put in the press, it is turned two or three times, and a clean cloth used each time of turning. On the third day the cheese is again turned once or twice. The heaviest press is now resorted to; and for a cheese of 60 or 70 lbs. weight, a pressure of 30 cwt. will be enough. On the fourth day it is usual to discontinue the pressure; but is sometimes continued a day or two longer.

Salting and Drying Room.—There are sometimes separate apartments for salting and drying, but generally one room answers for both purposes. The salt can now be applied externally only, and if any good is done by it, the effect must be in the hardening of the coat of the cheese.

It may be questioned whether it would not be a better plan to remove the cheese direct from the press to the cheese-room. The practice of external salting, however, is commonly observed. The cheese is taken out of the vat, and a strong bandage about two inches broad, and long enough to go three times round the cheese, is put upon it with salt underneath. It is fastened with strong pins; the cheese is placed on a stone or wooden shelf or bench, and salt spread on the top to within an inch or two of the edge. The cheese is turned daily, and fresh salt and a clean bandage are as often applied. Some persons continue this salting five or six days, others three weeks. The salting being completed, the cheese is well wiped or washed, a fresh bandage is put round it, and it is laid on a wooden shelf in the same room or an adjoining one, for the purpose of being dried. It is turned once a day, and when considered sufficiently dry it is removed to the cheese-room. The time for drying the cheese in the drying-room varies from seven to twenty days, and depends on the temperature of the weather, or of the cheese-room, to which it is next to be taken. In hot weather, and particularly if the cheese-room is exposed to the heat of the mid-day sun, the change from a too cold drying house is apt to cause cracks in the cheese. If these are left open, mites are soon generated, and the appearance of the cheese is hurt. In consequence, whey butter is sometimes used to fill them up. To prevent cracking, the windows of the drying and salting rooms are rarely if ever opened. The same is the case in the cheese-room, from which, in addition, the light is excluded. The heat of drying-rooms, it is thought, should range from 50 to 60 degrees.

When a cheese is taken to the cheese-room, it is usual to scrape and clean its exterior, and to place it, at first, in the coolest part of the floor, and finally upon the warmest part. The bandage is continued for several weeks, and sometimes until the cheese is sold. The cheese is turned and wiped daily for three or four months, at least, and afterwards every alternate day. The floor of the cheese-room is generally covered with dried rushes or wheat straw. It should be level, and well washed with hot water and soft soap twice or thrice a year. The temperature should be from 60 to 65 degrees.

It is added in conclusion, that the industry, cleanliness, and frugality of the Cheshire dairy-maids, are worthy of admiration. Though their labors are great, their cleanliness cannot be surpassed; and it is often to their good management that landlords are indebted for the payment of their rents.

PROPERTIES OF WOOL.

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YOLK—NATURAL OIL, &c.—The quantity of these substances in wool varies greatly with the breeds of sheep, and various circumstances attending their management. For instance, in the English long-wooled breeds, as the Liecester, Cotswold, Lincolnshire, &c., there is very little of what is called yolk, and, therefore, the washing of the sheep in the ordinary manner, is sufficient, with proper attention, to thoroughly cleanse the wool. Hence, in fleeces of this description, there is a greater quantity of real wool in proportion to the whole weight, than there usually is in fleeces from sheep of the Spanish or Merino varieties. Some of the latter, as is well-known, possess the habit of accumulating yolk or gum in the fleece to a remarkable degree; fleeces being occasionally met with, which, even after having been washed in cold water on the back of the sheep, are lessened in weight to the amount of fifty per cent. more, in passing through the further process of cleansing to which the manufacturer subjects them before they are wrought into fabrics.

Wool-growers appear to entertain different opinions in regard to the effect which yolk has on the value of the fleece. Some seem to suppose that the aggregate amount which they receive for their wool is increased from the greater weight which it possesses by being charged with this substance; but the sagacious manufacturer will of course regulate his prices according to the condition of the article he buys, not caring to pay for substances which are worthless to his goods. Others, again, endeavor to breed their sheep with as little yolk and animal oil as possible, acting on the supposition that these substances deteriorate the quality of the fleece, without being of any advantage.

Having had several inquiries in relation to this subject, the importance of which requires that it should be understood, we addressed a note to L. A. MORRELL, Esq., well known as the author of the "American Shepherd," and from his reply we make the following extract:

"If you will refer to the American Shepherd, (page 30,) under the head of "*Yolk*," I think your questions will be nearly all satisfactorily answered. You will there note, that the *natural oil* of wool combines with the yolk, yet there is not a *chemical union;* hence the yolk or gum can be separated by *thorough washing* on the sheep's back, but the oil remains, at least to a considerable extent. This substance [yolk] is glutinous in its character, which causes dirt to adhere with such tenacity to the external part of the fleece, that only the manufacturer's process of cleansing will free it. By his, the oil, with everything impure, is eradicated; but if the dirt could be removed, and the oil remain, that it would supercede the use, in some slight measure, of grease, preparatory to carding, there is not a doubt. Of the benefit of oil to wool when growing, were we to question it, would be doubting the wise provisions of Providence for the benefit of the brute creation. All wool-growers of nice observation will testify, that in a fleece much imbued with oil, the fibres are stronger, and invariably soft in feeling; on the contrary, a deficiency of this substance is followed by a harshness and brittleness. Individuals of a flock will have much more of oil united with yolk than others, and generally speaking, in reference to the Merino and Saxon variety, they are the healthiest and best constitutioned sheep. Still I have known exceptions to this.

"In conclusion, I consider oil of vast importance in perfecting the fibre. Manufacturers have no objections to it, further than it increases the weight of the fleece; but this will rarely apply to Saxon wool, if the sheep are not permitted to run too long after washing before being shorn; not so, however, in reference generally to Merinos. They have it in such profusion that the dirt collects in enormous quantity on the external part of the fleece, forming an indurated crust, which, when scoured, reduces the weight of the fleece nearly one-half. But free it of its impurity, and no wool works more kind-kindly than the Merino, or is softer 'in handle' after its manufacture. I state this on the authority of a manufacturer. Set it down as a 'fixed fact,' that manufacturers have no objections to gum; but they have very strong objections to paying as much for it as wool, or, indeed, anything at all. They value it as a concomitant of a strong fibre, and therefore less wastage in the process of manufacture."

In addition to the above, we extract from the American Shepherd the following, being a portion of the chapter to which Mr. M.'s letter refers:

"This peculiar substance, [yolk,] is so called abroad, from its adhesiveness and color; but with us it is termed *gum*, an appellation derived from its glutinous properties, quite as appropriate. It is apparent in the fleeces of fine-wool sheep, especially the Merino, at all seasons of the year, but very much so in the winter and spring; and although diffused through the whole fleece, yet such is its profusion in the Merino, that it is observable in detached concrete particles, resembling ear wax. According to the chemical analysis of Vanquelin, it consists principally of a soapy matter, with a *basis* of *potash;* a small quantity of *carbonate of potash;* a small quantity of *acetate of potash; lime in an unknown state of combination;* and an atom of *muriate of potash*. Its peculiar color, well known to those familiar with the fleeces of Saxon and Merino, is derived from the infusion of a small quantity of *animal oil*, and is in every respect a true soap, which would permit of the fleece being thoroughly cleansed by the ordinary mode of washing, were it not for the existence of this uncombined fatty or oily matter, which remains attached to the wool, and rendering it glutinous, until subjected to the process of scouring by the manufacturer.

"There are some, from ignorance, who imagine the *yolk* or *gum* to be, if not absolutely a detriment to wool, at least a useless concomitant. This, however, is a decided mistake. It is a peculiar secretion from the glands of the skin, acting as one of the agents in promoting the growth of the wool, and by its adhesiveness, matting it, thereby forming a defence from the inclemency of the weather. From accurate observation, it has been ascertained, that a deficiency of yolk will cause the fibre to be dry, harsh, and weak, and the whole fleece becomes thin and hairy; on the contrary, when there is a natural supply, the wool is soft, plentiful, and strong. The quantity is depending on equability of temperature, the health of the sheep, and the proportion of nutritive food it receives."

A deficiency in the natural supply of yolk, among some kinds of sheep in Britain, has induced the practice of smearing them with various mixtures of oil or grease. An example showing the advantages of this practice, said to have been recorded by the eminent breeder, BAKEWELL, is quoted by Mr. MORRELL, as follows:—

"An intelligent manufacturer in my neighborhood, who kept a small flock of good wooled sheep, informed me he had adopted the practice of rubbing his sheep with a mixture of butter and tar. He could speak decidedly to the improvement the wool had received by it, having superintended the whole process of the manufacture. The cloth was superior to what ungreased wool could have made, if equally fine; it was remarkably soft to the touch, and had a 'good hand and feel,' the appearance of the threads being nearly lost in a firm, even texture, covered with a soft, full nap."

Mr. MORRELL adds:—"The additional value that, the yolk imparts to the wool, affords a useful lesson to the wool-grower, to take such care of his sheep as will best supply the needful quantity. Equability of temperature being one requisite, he should protect his flocks during the winter season; and good condition being another, wholesome and nutritious food should not be spared."

SOFTNESS OF WOOL.—Mr. MORRELL observes, [Am. Shepherd, p. 35,] that—"wool of the same quality of fineness has not the same degree of softness." This we have frequently observed. Samples which under the microscope show the same degree of fineness, sometimes appear quite different to the touch—the one being soft and *cottony*, and the other harsh and rigid. Mr. M. remarks "that it is not as generally known as it should be, that softness is a quality of wool of much consequence. When the wool-buyer and stapler proceed to an examination of a parcel, their judgment will be materially affected as to its value, whether 'soft in handle,' or otherwise.

Wool is thought to be considerably affected by the nature of the soil on which the sheep are grazed; thus in England the chalky districts, it is said, invariably produce harsh and brittle wool. Mr. MORRELL observes, however, that "the general cause of a deficiency of softness in wools of the same breed, may be referred directly to the *condition* of the sheep. It has already been stated," continues Mr. M., "that when the animal was kept in uniformly good condition, the necessary quantity of *yolk* was supplied. Now if there is but little of this substance, which will follow an abuse in management, the wool will be less pliable and 'kind to feel.' Therefore it may be set down as an universal rule, that wool owes much of its softness to the *presence* of a *sufficiency* of *yolk*."

Mr. M. quotes the following from an English author, YOUATT, as showing how highly the quality of softness is appreciated by the manufacturer. Mr. Youatt says—"it has been affirmed that two parcels of assorted wool being taken, possessing the same degree of fineness, but the one having the soft quality in an eminent degree, and the other being harsh, the cloth prepared from the first, at the same expense, will be worth more to the manufacturer than the other, by full 25 per cent."

THE FIBRE—HOW AFFECTED BY KEEPING.—The observation of most wool-growers may have taught them that sheep in very high condition do not produce as fine wool as the same animals do when less fat. The abundant juices of the skin in fat sheep, would naturally distend the fibre to an unusual degree. On the other hand, poor keep, or disease, by lessening the fluids from which the wool is formed, would tend to render it smaller or finer in fibre. It is, therefore, plain, from these two facts, that to produce a fleece, the staple of which should be of uniform character or fineness throughout its length, the food and all circumstances affecting the growth of the wool and the condition of the sheep, should be as nearly as possible the same at all times; as irregularity in food would obviously occasion a corresponding irregularity in the size and strength of the fibre.

It is true that the wool of poor and sickly sheep is generally finer than that from those of the same breed which are in good health and flesh; but though such fine wool may be highly valued by those unacquainted with its true character, the experienced manufacturer will readily detect its rottenness, and its want of elasticity and other qualities necessary to form useful fabrics.

It should, then, be the object of the grower of fine wool, to supply his sheep, both summer and winter, with food adapted to their natural habits, and in such quantity that, while it shall not deteriorate the quality of the wool by the accumulation of superfluous fat, shall secure that medium and uniform condition necessary to the production of a fleece yielding the most profitable returns both to the grower and manufacturer.

The importance of these remarks will perhaps appear more striking in connection with the following extract from Mr. YOUATT's description of the fibres of wool.

"The fibres of white wool, when cleansed from grease, are semi-transparent; their surface in some places is beautifully polished, in others curiously encrusted, and they reflect the rays of light in a very pleasing manner. When viewed by the aid of a powerful achromatic microscope, the central part of the fibre has a singularly glittering appearance. Very irregularly placed minuter filaments are sometimes seen branching from the main trunk like boughs from the principal stem. This exterior polish varies much in different wools, and in wools from the same breed of sheep at different times. When the animal is in good condition and the fleece healthy, the appearance of the fibre is really brilliant; but when the sheep has been half starved, the wool seems to have sympathized with the state of the constitution, and either a wan, pale light, or sometimes scarcely any, is reflected."—[*See Youatt's work on Sheep, in the Farmers' Series, p.* 65.]

FARMING IN WESTERN NEW-YORK.

MR. TUCKER—I was much gratified last week in viewing a few farms in the neighborhood of Rochester, more especially those of Mr. C. B. STEWART and WM. BUEL, Esq.

The soil is a black muck, which has the appearance of being all organized matter composed of decayed timber; if so, it must contain all the necessary food for plants without manuring. According to chemical analysis, the four elementary bodies, hydrogen, nitrogen, oxygen and carbon must be deposited there. Still this land is as grateful for manure as any land I ever saw. How are the professors of chemistry to account for this? I should like to hear from them. I should at once have said it was want of sufficient alkalies, or inorganized matter, had I not seen the effect of barnyard manure, which was only adding organized matter to it.*

Mr S. has eight acres of carrots; part of them were manured from his stables, and were a very promising crop. Another part (about half of them) with leached ashes, are the finest crop I ever saw. And a patch in the centre, exactly the same soil, was planted without any manure. This piece looked as if they would not pay the trouble and expense of sowing and weeding. They were all weeded by German women at three dollars per acre the first time, and a dollar and a half the second.

His plan of soiling is very economical; twenty-five acres are divided into five lots for that purpose:

First—sowed in the fall with rye, cut and fed in May; manured and plowed on the first of June, sown with corn broadcast, and seeded with clover. This piece of corn had a greater bulk of feed upon it than anything I ever witnessed. The corn is fed in August; and he assured me that the clover in October afforded him a tolerable cutting.

Second—Sowed early in May with oats and peas—the green peas sold in July, and the vines and green oats fed as fast as the peas are picked. This lot is manured and plowed by the middle of July, sowed with oats again and seeded with clover; the oats fed in September, and the clover used the next season for soiling.

Third—Seeded down to clover the year previous, and is cut in June, August and October, and at each cutting it receives a top-dressing of compost or plaster, and is plowed again in the fall, and sowed to rye for the next spring.

Fourth—Sowed with oats early in April, cut in June; plowed and sowed with oats again, which are fed in August and September; plowed and sowed with rye for the next season.

Fifth—Corn and pumpkins planted in drills early in May, and seeded with clover; the corn sold green in the market, the stalks fed in August, and the pumpkins in October; the clover either used for hay or soiling the next season.

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* It is impossible to tell precisely what are the constituents of a soil, without particular examination. This land may contain all the *organic* constituents of plants, and yet it may lack the *inorganic*. The "four elementary bodies" named would be of themselves insufficient. The "barn-yard manure" probably contains principles which the "muck" does not; and its alkaline salts may tend to render the vegetable food of the muck more available. That alkalies are highly beneficial, is inferred from the effect produced by ashes on carrots, as is spoken of further on.—ED.

Mr. S. said he had kept sixty cows thus far, and had green feed for six horses, since the first of May; and he believes that twenty acres will carry them through the six months, when the land comes into a higher state of cultivation. He further says that this farm (sixty acres), when in the hands of a tenant in 1844, produced only one hundred and twenty dollars to be divided between landlord and tenant! He grows a quantity of broadcast corn, which is dried in small bundles, cut up in winter with his hay, and steamed with carrots, which practice he considers a very great saving. All the feed he purchases for winter, is about a peck of brewer's grains per day for each cow, or its equivalent in oilcake.

The Depot is well arranged: a passage sufficiently wide to drive a wagon between the cows' heads, with room enough to feed on either side. His office and steamer are on one side of the entrance, and a place for his wagons on the other, with his horse stable attached in range with the cows, so that all can be fed at the same time.

It is all admirably arranged, for which and for his new enterprise Mr. Stewart deserves great credit.

The farm of William Buell, Esq., is situated about a mile from Rochester. It received the second premium of the New-York State Agricultural Society in 1845. At the time he purchased it in 1844, it was in a most dilapidated state—large stones were strewed around in every direction; stumps, with their wide and extended roots, occupied much of the land; a considerable part consisted of swampy hollows, and it was almost destitute of fence.

His house is built on a hill in the centre of the farm, from which is a gradual slope on either side to the flat land below. He has now one hundred acres of wheat on the farm, and part of which is on some of these swamps which have been reclaimed by thorough draining. Judging from the straw, I should say that some of it would yield forty bushels to the acre. In a portion of his crop, the weevil had made ravages, and destroyed much of it. He was drawing the wheat to his barn, and threshing it with a machine of six horse power. This barn is built on a side-hill, and the straw is conveyed by an endless chain to an exceeding large stack, and requires two men to remove it from the machine as it it is threshed. This stack of straw denoted that my friend had done *something* for his soil. It was the largest I ever saw. The large piles of stones in every direction, ready to be conveyed in winter and placed in stone walls, prove that industry and the purse have been good friends. The compost heaps in the fallow fields denote the good husbandman. He had twenty acres of corn looking as finely as corn can possibly look, and other grain in proportion. The hospitality and good cheer in the house proved his valuable friendship. Comfort, happiness and plenty seem to reign around him, and his example will do much to all observers.

Wm. H. Sotham.

NUTRITIVE PROPERTIES OF POTATOES.

An article has lately been published in the *Irish Farmer's Journal*, in regard to the relative proportion of nutritive material contained in potatoes compared with that contained in wheat and other grain, which we think can hardly fail of commanding attention from those qualified to investigate and elucidate this subject. Considerable diversity of opinion, it is well known, has existed in regard to the comparative value of the potato. The results of most chemical analyses have been looked upon as indicating that this root possesses but very little nutriment; though we believe that this conclusion has not been so readily reconcilable with facts developed by practical observation. Certain it is, that a higher estimate is usually allowed to potatoes by those who form their opinions from actual trial, and the results produced on the animal system, than most chemical tests would justify. We do not say this as opposing science, for it is obvious that *real* science exhibits no discrepancy with practical facts; [illegible] never oppose each other, whatever may be the mode by which they are discovered. The attainment of truth is, however, the grand object, and in that view, we are gratified to meet with the article mentioned; which, if not wholly true itself, we think can hardly fail to elicit such an examination as will much enlighten the subject.

The article in the Journal relates chiefly to a statement and facts therewith connected, laid before the Lord Lieutenant of Ireland by Mr. Jasper W. Rogers, of Dublin, a Civil Engineer, who, it is said, has for several years devoted considerable attention to the composition of the potato and its susceptibility of being applied to various uses. From the extracts which we give below, it will be seen that Mr. Rogers deems the nutritive properties of the potato, when wholly converted into meal or flour, not essentially different from those of wheat, while the aggregate amount of substances proper for the support of animal life, afforded by a given quantity of land, are held to be *four times greater* than can be had from wheat.

At the request of the Lord Lieutenant and other gentlemen, Mr. Rogers exhibited, at an appointed time, some of the results of his method of making the potato available as food in many different forms. This exhibition is stated to have been "in the form of an elegant *déjuné*, all the items of which, with the exception of coffee, were prepared more or less from the potato; when a most satisfactory account was afforded by Mr. Rogers, of the different processes of their preparation, with much interesting information relative to the value of the potato itself, which, he very justly observed, is too much overlooked. Every one present was astonished at the rich treat provided on the occasion, which consisted of soup, stirabout, milk porridge, jellies, blanc mange, Spanish flummery, and pastry of all kinds, made, as we have already stated, principally of the produce of the potato, either as meal, flour, or fecula.

"After the gentlemen present had partaken of the various preparations, Mr. Rogers observed, that the preparation of the meal and flour from potatoes was so simple that it could be accomplished in the cottage of the poorest peasant. He then described the component parts of each food upon the table. The general proportion being one-half potatoes; some, however,—viz., milk porridge, 'Scotch bread,' and rock biscuits—being entirely made from it; also the jellies, blanc-mange, &c., produced from the *pure fecula*, without animal matter of any kind—in fact, no addition but the usual seasonings. The soup, also, which appeared to be a palatable and nutritious food for the lower classes, was stated to be made of a small quantity of bacon, thickened with meal of the potato, and which was capable of being made in a short period of time, at a cost of about one farthing per pint.

"Mr. Rogers then alluded to the general impression as to the want of nutritive power in the potato, and deprecated the publication of statements which were founded in error, stating that there was 'little, if any, nutriment in the potato.' He contended that the nutritive properties of the meal and flour of potatoes were almost, if not entirely, equal to that of wheat; and then gave the following analyses of each, assuming the constituents for the support of animal life, contained in vegetables, to be starch, sugar, and gluten When converted into meal, the potato contains—

Starch and sugar,	84.8
Gluten,	14.82
Oil,	1.10
	100.

While wheat converted into meal, contained—

Starch and Sugar,	78.20
Gluten,	17.53
Oil,	4.27
	100.

Thus showing that the difference between the gluten was but 2¾ per cent., while the starch and sugar were more abundant.

"The difference between '*meal and flour of potato*,' as prepared or recommended, and 'farina,' was pointed

out. Farina is the starch of the potato, taken from the fibre, and contains nothing beyond the properties of starch—while the *fibre*, which is thrown away in the manufacture of farina, is rich in animal matter and oil, and by being combined with the farina, or fecula, produces a meal or flour, closely analagous to that of grain. This fact it was particularly necessary to bear in mind, in order to counteract the impression that there was but little nutriment in potatoes—a strange one, where so many millions lived on them as their only food.

A comparison was then entered into between the relative amount of food obtained from an acre of land, in wheat and potatoes. On this subject, Mr. Rogers stated that he did not rely on his own experience, but cited the authority of practical men as to produce, and of eminent scientific men as to the analysis of the respective crops, stating the following as the result of his inquiry:—

	Starch and Sugar.	*Gluten.*	*Oil.*
1 acre of wheat,.....	825 lbs.	185 lbs.	45 lbs.
1 acre of potatoes, ...	3427 lbs.	604 lbs.	45 lbs.

Thus it appears that potatoes will produce of meal and flour, FOUR TIMES, nearly, in weight, what can be had from wheat—a fact not generally known, but which could not be contradicted. He begged to impress this startling fact on the minds of those who heard him, and hoped to rescue the potato from the calumnies thrown upon it."

......

The following table, calculated by Mr. SOLLY, chemist to the Royal Agricultural Society, shows the comparative amounts of nutriment afforded by certain crops, according to his analyses:

AVERAGE PRODUCE PER ACRE.		Water.	Unazotized Organic Matter.	Protein Compounds.*	Inorganic Matter.
	lbs.	lbs.	lbs.	lbs.	lbs.
1. Turneps,	25 tons, or 56,000	51800.0	3309.6	442 4	448.0
2. Carrots,	15 tons, or 33.600	29433.6	3128.2	655 2	383.0
3. Parsneps,	12 tons, or 26,880	21542.7	4642 2	561.8	333.3
4. Potatoes,	8 tons, or 17,920	14228.5	3053.6	433.7	204 2
5. Barley,	35 bsh., or 1,800	237.0	1314.2	205 9	42.3
6. Oats,	40 bsh., or 1,700	238.0	1215.7	187.8	58.5
7. Peas,	25 bsh., or 1,600	137 6	1017.7	399 4	45.3
8. Beans,	27½ bu., or 1,750	138.2	979.0	581 2	51.6
9. Wheat,	28 bsh., or 1,960	243.6	1184 4	248 4	33.6
10. Cabbage,	10.000 plants, or 80,000	73840.0	4184.0	1456.0	524.0
11. Jerusalem Artichokes,	500 bush., or 28,000	22176.0	4988.8	599 0	336.0
12. Beets..................	75.000	65650.0	7312 5	1020.0	817.5
13. Buckwheat,	30 bsh., or 1.300	162.5	94.52	177 5	17.5

* "Protein compounds" form the nutritive portion.

CEMENT FOR YARDS AND FLOORS.

......

A correspondent of the *Agricultural Gazette* speaks of the value of "tar compost," so called, for forming ground floors of carriage houses, barns, stables, also for walks, barnyards, &c., for which purposes it is represented to be excellent, "being thoroughly dry, wholesome, cleanly, smooth, easily repaired, noiseless under motion, and inimical to vermin, besides being so very cheap, only costing from 3d. to 4½d. [6 to 10 cents] per square foot."

The writer describes his mode of making such floors thus: "Lay down a good solid concrete of broken bricks and tiles or chalk, or both materials mixed together, only they should be broken smallish; having made this quite level, pour on it coal tar, until the rubble is just covered. Then sift through a fine sieve a mixture of coal ash and sand, or coal dust and powdered lime, or *all* mixed together, or any one separately, it makes very little difference. I prefer quicklime, ashes and sand, in equal parts, but I have used lime-dust alone, and found it answer, though it is longer drying, and is not quite so firm. My plan is to sift on plenty, and have the work well rolled or trodden, supplying more siftings as it becomes necessary. The proper quantity of siftings will work in without any trouble at all, if time be allowed and the floor is used. Sometimes two or three coats are wanted, and are always best; often one will do. After the first coating upon the rubble, no more is necessary to be done either for an extra coat or a repairing coat, than to pour down some tar and spread it about with an old brush, covering it with siftings. Any laborer can mend or even make a floor of this sort. * * * The reason I prefer brick rubble to stones is this: I have found that by long wear, a small stone, or an edge of a piece of a larger size, will work up; whereas broken bricks or chalk will saturate partly with tar, and will wear down with the rest of the surface. I think the value of such a bottom for a stable would be greatly enhanced by its impermeability to the drainage from animals."

Another correspondent of the paper above mentioned gives his mode of making a similar cement, as follows:

"Two parts sifted coal ashes and one part of quicklime, to be thoroughly mixed together in a conical heap; then proceed as in mixing up fine mortar, making a hollow in the top of the cone, and pouring in gas tar, not gas water, or half and half, as it sometimes comes out of the reservoir, but the thick tar, and gradually mix as you would mix water with the mortar or plaster, until the heap is about the consistence of pretty stiff mortar. In forming my yards and sheds for cows, and those attached to loose boxes for horses, two years ago, in order that all the fluids should drain towards a tank, I employed this compound, spread about three-fourths of an inch thick, on a surface formed with stone broken very small, and a small quantity of fine gravel scattered over them and then rolled down, to prevent unnecessary waste of the cement. This was laid over, and then patted down with an iron shovel. In the course of two or three days, just before it gets hard, pass an iron roller over it. In the course of a week, if properly done, it will be as firm as stone, and not affected either by drouth or wet in any degree. My yards have been in use, covered with muck during two winters, and exposed dry and clean to the sun during two summers, and I perceive no change. * * * I have also used this covering for the top of stone walls, for which it answers admirably."

USES AND VALUE OF THE MAPLE.

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OUR friend HOLMES, of the *Maine Farmer*, furnishes an interesting, and (of course,) *humorous* article on the uses and value of the various kinds of Maple. He states that there are ten different species of this tree in the United States, five of which flourish in Maine. The use of the wood in the manufacture of various articles of cabinet ware is well known. The *bird's-eye* maple, and the *curly* maple, make some of the handsomest veneering of any kind of wood. No better fuel is furnished for our fires than well-seasoned hard, or sugar maple. The tree is also one of the most beautiful as an ornament, and affords, besides, in its saccharine sap, the most agreeable sweet in nature. In view of the various uses, and the many comforts which the maple affords, Dr. HOLMES almost "bursts into a song." Hear him:—

"We were once in a house, not far off, during a severe snow-storm. The elements were raging with their utmost fury out of doors, but within we had a summer atmosphere, and every thing was as comfortable as an evening in June. On looking around we were struck with the fact, that much of our comfort at that time was founded on *maple*. A brisk fire of maple wood was glowing and crackling on the hearth. The floor of the room,—doors,—sashes,—mantlepiece, and other trimmings, were maple;—the chairs were maple,—the tables were maple,—and that the sum of our maple comforts might be complete, our host brought on some maple sugar for our tea, and some excellent maple vinegar for our pickles. In his front yard were some splendid maple trees, and at a little distance was a beautiful maple grove, which gave a shelter in winter, an excellent shade in summer, and a plenty of good sweet sap in spring, from which he made his sugar and his beer and his vinegar. His bedsteads were maple,—his bureaus were maple,—his ox-yokes were maple,—his sled was maple,—the felloes of his cart-wheels, his cart-axle and tongue, were maple,—the wood of his harrow was maple,—his roller was maple,—his walking stick was maple, and he had a maple weathercock on his barn; in short, he was *maple all over*. 'If we are not in *Mapledom* now,' said we, as we looked around, 'we don't know where that territory is.'"

SOLAR GAS.

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THE editor of the New-York *Farmer and Mechanic*, describes an apparatus which was exhibited and put into operation at the late National Fair, for the manufacture of what has been called *solar gas*. The gas, he says, was made from refuse kitchen fat, whale oil, and other greasy substances, in a retort 7 inches in diameter, affixed to a stove 15 inches wide, 22 inches high, and 24 inches long. The oil or fat passes through a syphon into the retort which is filled with soft pieces of brick; then through water into a gum elastic bag, and from thence through a meter to the burners. A building 600 feet long, it is stated, was lighted through 60 burners, by this apparatus. The flame is said to emit no smoke or smell. The gas, when properly made, is said to exceed all other kinds for brilliancy, cheapness, and cleanliness. It has already been applied to the lighting of many factories, several churches, hotels, and steamboats. A man is about establishing himself in New-York, for the purpose of fitting up apparatus for the manufacture of this gas.

MOVABLE FENCES.

......

EVERY farmer finds it occasionally convenient to move the division line between his fields. Improvements are made in the arrangement of his lots and crops; and briers and weeds, which sometimes obtain possession under fences, render the cultivation of the ground the easiest and best way for their extirpation. Hence, a neat, cheap, and substantial movable fence becomes a desideratum.

Many farmers are acquainted with no other movable fence than the old-fashioned rail or worm fence, which when "staked and ridered" usually occupies about one rod of untilled ground in width. The broad fence, when neatly and substantially made, is very durable; and from the ultimate cost, and the little ground it covers, is decidedly cheap, and more especially so from the consideration, that time is not lost in constant repairs, nor crops destroyed by the inroads of cattle and pigs, so frequent where some other fences exist. But a board fence, when once built, must stay where it is—it cannot be transferred to another line without an expense nearly equal to its original cost.

In the Cultivator for 1844, p. 251, is given a figure and description of a neat movable fence, represented in the annexed figure, made of separate pieces four feet high, and eight feet long, driven into the ground 18 inches, into holes made by the crowbar, and withed together at the top. This fence is made of round poles, split into halves, and fastened together by wrought nails, the ends passing into holes in the sharpened end-pieces; and costs from 50 to 60 cents per rod.

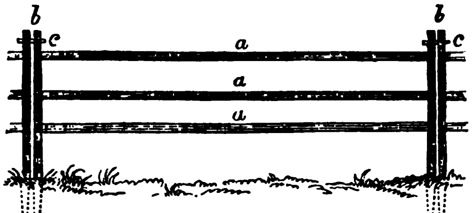

Fig. 70.

We have constructed a neat movable fence for confining cattle as follows:—Hemlock timber, fourteen feet long, and sawed into pieces two by four inches, (*a*, fig. 70,) are morticed into the slender sharpened posts *b*, the two upper bars being 11 inches apart, and the lower 8 inches. Holes bored horizontally through the tops of the posts, admit the pins, *c*, and hold the whole securely together. To confine pigs or sheep, nail a single board at the bottom. Two men will put up ten rods of this or the former kind of fence in one hour.

Another mode which has been found cheap and convenient, is the following: Plank is sawed at the saw-mill, for the end pieces, four feet and a half high, two inches thick, and eight inches wide at bottom, and four inches at top, as indicated by *a*, fig. 71, which represents a cross section of the fence. Into these, boards are fitted, the same in length and width as in common board fence; a narrow, mortised inch board being slipped on to the middle to stiffen them. Cross pieces, *b*, of narrow plank, four feet long, are nailed at right angles to the bottom of the posts or end pieces, and resting on stones, prevent the fence being blown over by wind. The addition of a wooden pin through these cross pieces into the posts, renders the fence stronger. The tops of the posts are connected by the horizontal pins *c*, *c*. It scarcely ever becomes necessary to plow nearer to a fence than two feet, hence these cross-pieces do not project too far into the fields. This fence possesses this advantage,—none of it touches the earth, hence very durable wood need not be sought; the *amount* of material it requires is small; and may be obtained to order from any saw-mill; the cost of erection, according to the statement of an acquaintance who has built a considerable extent, is decidedly less than that of common board fence, the digging of post holes and setting of posts being entirely obviated. Fig. 3, exhibits the appearance of the fence, at a side view, when finished.

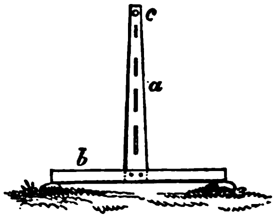

Fig. 71.

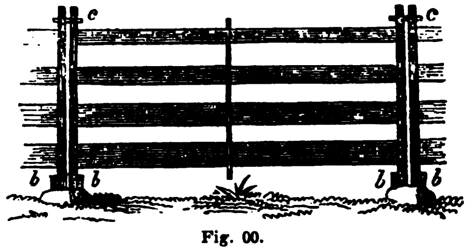

Fig. 00.

INDIAN CORN.

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WE have before spoken of the value of Indian corn in supporting the animal system, and have alluded to the astonishing performances of the Indians while sustained on meal of parched corn, mixed with water. It appears from various accounts, that the Mexicans are in the habit of using corn in a similar way. It is said that after the corn is parched, it will keep sweet a long time in any climate. THOMAS FALCONER, a writer in the *Agricultural Gazette*, states that he travelled in Mexico with a bag of it for many weeks, and he says, if his "supply had lasted it would no doubt have remained sweet many weeks longer." He states that—"When a Mexican undertakes a journey of many days, at a distance from towns or villages, he fills a bag with the flour of this parched corn, mixed up with sugar, and sometimes a small quantity of spice. With a bag thus filled, tied to his saddle, he considers himself to be well provided with food. When he reaches a stream, he puts half a handful of this corn in a cup, and filling it up with water, stirs it to melt the sugar, and drinks it off; or, if he gets a fire, he heats the water and stirs in the corn. For many weeks during a journey from the north of Mexico to the south, exposed to some hardships and great fatigue, I lived, and with truth I may say, *fattened* on this preparation of corn. At breakfast, at the halt of the mid-day, and at the setting of the sun, my cup of hot water was on the fire, the parched corn-meal with its sugar and spice was put into it, and in a minute or two my repast was prepared. I thought nothing could be more agreeable or nourishing. I cannot relate the mode by which the Mexicans parch the corn, for I never saw it done. The grinding of it was on the stone so constantly described by all travellers who mention the corn cakes of Mexico, called 'tortillas.''

THE STRAWBERRY.

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MR. TUCKER—In your Cultivator of this month, you speak of the Iowa strawberry, as a variety recommended by me. Mr. Disney, about 6 years since, brought me plants from the prairies of Iowa. A part were staminate and a part pistillate. The fruit of the pistillates was very small and of no value. The staminate is a good bearer for that class of plants, and the fruit large and handsome; but it will not on an average, produce perfect fruit on one-fourth of the blossoms, nor do I know of any large fruited staminate that will. Its only value is as an impregnator, and for that it is subject to one objection.* It is the most vigorous grower that I am acquainted with, and if not watched, will soon root out all the pistillate plants.

The Swainstone Seedling, of which you speak highly, has not with me borne one perfect fruit to 20 blossoms. From England, the British Queen has been obtained as both staminate and pistillate. Which is the genuine is not known. I wrote to Liverpool to inquire, but they acknowledged that they were not aware of the existence of staminate and pistillate plants, but knew the Queen soon became barren. The Deptford Pine, is staminate, and of no value for a crop. The Elton is the same as the Methven Scarlet, Methven Castle, Warren's Seedling. It is pistillate, but produces but few blossoms, and of course is not an abundant bearer. The fruit is next to Hovey's Seedling in size, but of inferior quality, and is the same that was cultivated in Philadelphia, under the name of Kean's Seedling. Of all the large fruited staminates I have seen the Ross Phœnix is the best bearer, but it is of no value for cultivation where Hovey's Seedling, Hudson, Kean's Pistillate Seedling, and other pistillates can be obtained, and their cultivation understood. Till it is, the Cincinnati market will continue to be supplied with more strawberries than New-York, Boston, and Albany united, and the fruit will cost too much to come within the reach of all their citizens.

Cincinnati, July 18, 1846. N. LONGWORTH.

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NOTE.—It must be understood that in the above remarks, MR. LONGWORTH speaks only of his own observation, and in reference to the character of strawberries as exhibited in his own garden or neighborhood. But it should be remembered that climate and soil greatly affect the productiveness of all plants, strawberries in particular. We did not examine the blossom of Mr. WILSON'S Iowa strawberry, but are informed that it appeared to be perfect within itself. At any rate, it is certain that a very unusual proportion of the blossoms produced perfect fruit. Mr. LONGWORTH considers the Elton the same as the Methven Scarlet, Warren's Seedling, &c. We will not now say he is incorrect, but gardeners here differ with him on this point. Again he considers Ross' Phoenix of no value where Hovey's Seedling and some others can be obtained. To this we have only to remark that in Mr. WILSON'S garden we saw both the Ross Phœnix and Hovey's Seedling in beds nearly contiguous, and the former was decidedly the most productive, and fully equal in average size.—ED.

REFUSE OF BREWERIES.

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At a late meeting of the Agricultural Chemistry Association, Scotland, Prof. JOHNSTON spoke of the value of the refuse of breweries, as food for cattle and other animals. He divided the refuse into three kinds, the two first of which are most valuable, viz., the "cummins," or the dried roots of the barley, and the "draff," which we suppose to be what is commonly called *grains*. In reference to the analysis of draff, Prof. J. stated, that it contained about 75 per cent of water, leaving 25 per cent of dry matter—resembling potatoes in this respect, they containing about the same quantities. Twenty per cent of this dry matter was stated to be husk, the rest, consisting of a little starch, sugar, gum, and compounds of protein, chiefly albumen, attached to the husk. "These compounds," he said, "amounted to six-tenths of a per cent in draff." The ash was about one-fifth more than the potato; he thought it therefore, very much like the potato, the latter only containing more of the protein compounds. He stated that the ash of the draff contained one-half its weight of phosphates. "These," he said, are extremely valuable as they supply the material of bones, and also the feeding of cattle as they are contained in the milk, as seen from the following table:"

Composition of Milk of the Cow.

Casein,	4.5
Butter,	3.1
Milk-sugar,	4.8
Saline matter,	0.6
Water,	87.0
	100.

"Milk contains more than half a per cent. of saline matter, chiefly phosphates. Ten gallons of milk contain one-half a pound of them, and 100 lbs. of draff contains the same. Draff weighs about 46 lbs. per bushel; if a cow, therefore, eats one-half a bushel a day, that is, about 25 lbs., it gets but a very small quantity of phosphates—much less than it ought to get. The protein compounds supply casein; now milk contains 4½ per cent. of this valuable substance. It exists in wheat to the amount of ten or twelve per cent, and in oats, to 16 per cent."

Prof J. then spoke of the large proportion of the protein compounds contained in peas and beans, and mentioned the comparative cheapness of these articles for certain purposes. If, for instance, it was wished to have cheesey milk, bean-meal should be given to the cow, on account of the quantity of casein. He thought the "value of draff was more to the cow-feeder than to the farmer, as the former wanted milk. It contained," he remarked, "a large quantity of water; but there was another advantage, as the water was diffused through every part of it; it was therefore much more soluble, as it was brought by this diffusion of the water to something like what it was in the green state; and like green grass it was more soluble in the stomach than hay."

Prof. JOHNSTON spoke of the "cummins." These, we believe, are what is here called *sprouts*—the roots of the grain, which are rubbed off before brewing. He said, "of all the substances he knew, they were the most valuable as dry food. They contained more of the protein compounds than oat-meal, having about 29 per cent. of that substance necessary for forming the curd of milk, and for laying on muscle. The ash contains more than half of its weight of phosphates; and they are therefore valuable for forming bone. Cummins leave about 7 per cent. of ash, while white draff leaves about one."

In this country, in the vicinity of breweries, grains or "draff" afford a cheap and valuable food for milch cows. In this vicinity they can be had at from four to eight cents per bushel—the former being the summer, and the latter the winter price. At these rates, they afford the cheapest food for those cow-keepers who supply the city with milk. We are informed that the "cummins," or sprouts, are also considerably used as cattle food in this vicinity, and we have no doubt they are valuable, as Prof. Johnston has shown.

INSECT REPELLER.

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J. S. Stoddard, of Palmyra, N. Y., has lately adopted a very cheap, simple, and effectual contrivance for preventing all insects from ascending the trunks of fruit trees. It would doubtless be of great value for the canker worm, and it may possibly be of use for protection against the curculio. His trees having been much injured, as he believes, by ants, he has entirely excluded them.

The earth round each tree, is in the first place slightly embanked, and made otherwise quite smooth and level, and then a thin and smooth bed of gravel is made to encircle the trunk, on which is placed a coat of common lime-mortar. This is smoothed with a trowel, so as to leave a circular trough on its upper surface, for the reception of a mixture of tar and whale oil. The width of the trough may be three or four inches, and half an inch deep. The circular bed of mortar approaches within an inch or two of the bark of the tree, and does not touch it. A small lake of this adhesive mixture thus encircles the tree, and through which no insect can pass. The troughs will last one season through, but the frost of winter breaks them up. The quantity of mortar, however, required, is quite small, and being a cheap material, and applied in a few minutes, the cost is very trifling.

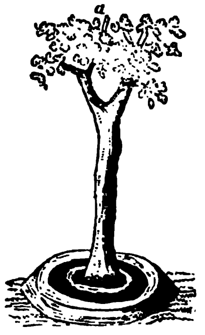

Fig. 73.

The troughs were first filled with unmixed tar; but a crust forming during cool nights, on which the insects could walk, the addition of one quarter whale oil was found to obviate the difficulty, while the mixture was not at all affected by the rain.

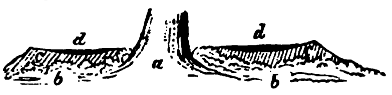

Fig. 74.

The above figures represent the contrivance: Fig. 73, being a perspective view, and fig. 74, a cross section, on a larger scale, where *a* is the the trunk of the tree, *b, b,* the soil or gravel on which the bed of mortar rests, *c, c,* the mortar bed, and *d, d,* the circular lake of tar and oil.

THE WHEAT MIDGE.

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The insect here called "the weevil," though improperly so, which in the larva state does so much damage to our wheat, is known in England under the name of the "Wheat Midge." It frequently occasions great damage there; the crops being sometimes lessened from this cause to the amount of from forty to fifty per cent. No very effectual means of preventing the ravages of this insect seem to be known either in Europe or this country. They prevail in great numbers in some seasons, and in others are greatly diminished. The causes of this variation are supposed to be certain states and conditions of the atmosphere. Burning weeds to the windward of fields infested with them, has sometimes, it is said, proved of advantage. But the greatest destruction of the insect is doubtless effected by means wholly independent of human aid. In this country, according to Dr. Fitch, (see his Essay on the Wheat Fly,) the common Yellow Bird devours immense numbers of the larvæ; they are also devoured by several kinds of carnivorous [illegible] and killed by ichneumon flies.

In a lecture on insects destructive to crops, lately delivered before the London Farmer's Club, by Mr. Baker, a report of which we find in the *Farmers' Magazine*, some very interesting facts are given in relation to the destruction of the Wheat Midge by the ichneumon flies. Of the latter, he states, there are about five hundred species, several of which are destructive to the Wheat Midge and caterpillar. "I have," says Mr. B., "frequently observed these small black flies, or 'nidgets,' as we call them in Essex, at their work of destruction. They will insert themselves between the wheat and the chaff, and immediately attack the Wheat Midge. They are very voracious, and will strike maggot after maggot in rapid succession, as fast as they can pass from one to another. In passing up a field one day, on my way to market, I saw a number of these black flies on an ear of corn which I plucked, and upon exmination of it, by opening the chaff, I found they attacked the Wheat Midge most voraciously. I carried it to market, and examined it again when I got there; but their voracity continued just the same. In striking the maggot, they insert an egg in its body; and the maggot then gets into a place of concealment and dies, just as sheep seek concealment when suffering in a similar way. The little insect, which becomes the ichneumon, subsequently emerges from the dead insect: it is first formed into a chrysalis, and becomes a fly the following summer. I had a number of these insects, which I had intended to bring with me, but they escaped my memory. They attack caterpillars by hundreds, and seem so determined in their endeavors to effect their object, that the more you attempt to frighten them away, the more bold they become. It is to this class of flies that we are so much indebted for ridding us of the pest—the Wheat Midge."

DISEASE IN HORSES.

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Friend Tucker—According to promise, when at your office the other day, I proceed to give a description of a disease that many horses were troubled with the past winter in this and the adjoining counties. As a general thing, it did not prove fatal, but produced abortion in mares in every case of which I have had any knowledge. I shall give the particulars of those cases only that occurred in my own stable, seven in number, five being mares in foal by a fine English blood horse.

Symptoms: Stiffness in all the legs, moving only with difficulty; running of the eyes, with an inclination to keep them closed, and but little appetite; one and sometimes both hindlegs swollen and quite sore to the touch of the hand, with a rapid falling off in flesh.

These symptoms continued four or five days, when the animals would again resume their former condition. Three of the above mentioned mares worked steadily in the team; two of these did not lose their foals until four weeks or so after their recovery, when they had regained their flesh and spirits. The last of the three lost hers immediately after beginning to recover; the other two in foal were driven occasionally. One of these lost hers like the last of the three above mentioned; the other kept hers two or three weeks. One young mare, driven part of the time, but which was not with foal, exhibited symptoms like the others. The seventh and last, a colt, two years old past, lay upon his side nearly the whole of the time, four or five days. He occupied a stable where there were three other colts and a mare with foal, none of which were affected. I thought it was evident that they took it from each other, and were taken about two weeks after being exposed; but the case of the colt in the second stable would not warrant that conclusion. I also purchased a working mare about that time, and put her in the first stable, where the six first mentioned cases occurred, and she was not affected; she being the only one in that stable that escaped. These cases occurred from first of 2nd mo. (February) to first of 4th mo. (April).

The horse spoken of, by which these mares were with foal, was purchased late last season by myself and one of my neighbors. He died suddenly last first month (January) while I was a few days from home. He was

ı one or two miles in the evening, seemed very
and playful, and was put in his stable about nine
ht. When first seen in the morning, he was roll-
tumbling, and pawing, frothing at the mouth,
ing, &c. and died in one or two hours. He had al-
appeared well and hearty since he came into our
ssion. At the time he was taken, he was thought
healthy and gaining in flesh. I am told by those
ıt, that a part of the contents of the stomach were
to have exuded through the maw, which organ
d more like a sieve or network of thread than any
else. I cannot think he was killed by worms,
se they were unable to find any, except a very few
which I think could not have so wholly destroyed
ıaw in so short a time; and if they had been long
rk, the horse must have shown some symptoms of
ss.

ıve tried to be as particular as possible in describ-
l the above cases, that those having any knowledge
h things may be able to suggest the causes through
olumns of the Cultivator, coming as it does direct-
fore the eyes of so many of our farmers, breeders
ıisers of horses. I wish I could say it comes to *all*
ırmers; for if there is any other plan by which the
r can invest a dollar and make a greater per cent
thereon, I have yet to learn what that plan is.

'ant to ask of the contributors to your columns
attention to the interests of the horse; more infor-
n in regard to the best breeds, and directions in
ing and rearing them, that we may learn to raise
rorthless nags, and lose less valuable ones. We
enough to risk in raising horses to warrant our tak-
me and trouble in learning to avoid as many mis-
ıs possible, and have the best animal when reared.
'ay we sometimes miss of having a valuable horse,
le or use, I consider altogether needless; I mean a
n training or breaking. Although there are va-
dispositions among horses as among men, yet if
al justly with the colt, while in training, the horse
nost certainly do us justice in turn.

JOHN KEESE.

'u, *7th mo.* 13*th*, 1846.

PROPER TIME FOR CUTTING GRASS.

......

ın article in our June number, on "Hay-making,"
lvocated the practice of cutting grass for hay be-
: shall have gone to seed. The reasons given for
actice were, that plants at the time of flowering
n starch, gum and sugar, which are known to nou-
ınimals, and that in the formation of seed these
nces are exhausted from the stems and leaves,
roody fibre deposited in their place. We have
ıut one attempt to controvert this reasoning, and
e inclined to believe the general views set forth in
rticle, are in agreement with the opinions and
ces of our best farmers; nevertheless we cannot
the satisfaction of further strengthening our own
ıents, by adducing others which seem to have been
ed on the closest scientific investigation. The
erly (Edinburgh) Journal of Agriculture for July
ontains a notice of a Government report lately pub-
, on the "*Chemical Nature of Grass and Hay as
for Cattle*," from which we extract the following:
rass, as may be readily imagined, varies consider-
n its composition, according to its age, and also,
y be expected, according to its species. The ex-
ents undertaken during the present investigation,
sufficiently demonstrated the first of these posi-

But the second is still open for inquiry, since
sts who have previously analyzed grass and hay
omitted to particularise the botanical names of the
which they have examined. The grass used in
resent experiments consisted almost entirely of
rass (*Lolium perenne*). The amount of solid mat-
this grass varied from 18 to upwards of 30 per
according to the early or late period of its growth.
grass first springs above the surface of the earth,
rincipal constituent of its early blades is water, the
ıt of solid matter being comparatively trifling; as it rises higher, the deposition of a more indurated form of carbon gradually becomes more considerable, the sugar and soluble matter at first increasing, and then gradually diminishing, to give way to the deposition of woody substance. * * * If, as we have endeavored to show, the sugar is an important element of the food of animals, then it should be an object with the farmer to cut grass for the purpose of hay-making at that period when the larger amount of matter is contained in it. This is assuredly at an earlier period of its growth than when it has shot into seed; for it is then that woody matter predominates—a substance totally insoluble in water, and therefore less calculated to serve as food to animals than substances capable of assuming a soluble condition. This is the first point for consideration in the production of hay, since it ought to be the object of the farmer to preserve the hay for winter use in the condition most resembling the grass in its highest state of perfection."

CORN DESTROYED BY CROWS,

EVERY farmer is aware, is often a serious loss. Tarring the seed is effectual; but where several bushels per acre are sown for raising fodder it is entirely out of the question. Stretching cords horizontally on upright poles about the field, has been resorted to with success, and is becoming common. Dr. Cook, of Sodus, lately showed us the result of an experiment which was somewhat interesting, as exhibiting the singularly cautious nature of these black scoundrels.

An oblong piece of land was sown, five bushels to the acre, broadcast, for fodder. A cord was stretched on poles, in a zigzag direction, from one end of the field to the other, as shown in the annexed figure; all the parts of the field indicated by the letters, *B, B, B*, being in angles formed by two straight portions of the line, were wholly untouched by the crows; but the part *A*, though near the line, but not inclosed in an angle, was stripped clean by these marauders.

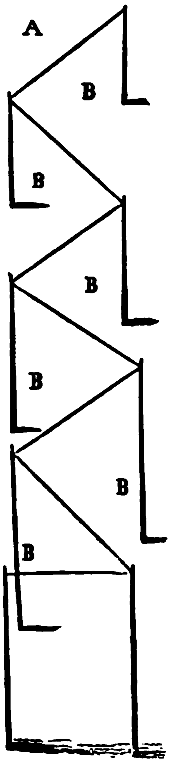

Fig. 75.

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KILLING INSECTS.—The Genesee Farmer says, they have tried ashes, salt, soap-suds, decoction of tobacco, and killing bugs with the fingers, for protecting cucumbers and melons. The latter they find most effectual. We never heard of its not being effectual, when vigorously applied—other remedies often fail.

SOAP AS MANURE.—T. Dalton, a silk dyer, says, in the London Agricultural Gazette, that he uses 15 cwt. of soap weekly, to discharge the oily matter from the silk, and forming of itself a kind of soap,—the whole ot which yields from 4000 to 6000 gallons of strong soap-suds per week. This he has lately applied to his farm, and "its effect is most extraordinary." It has been used only one season, and its results cannot be accurately given, but he considers it more powerful than any other manure; and he thinks if farmers were allowed the drawback of the duty on soap used as manure, as manufacturers are, it would soon supercede guano.

RICHNESS OF MILK.—The Boston Cultivator says that Alderney cows usually give milk so rich, that 7 quarts will often yield a pound of butter; and that of other cows it requires nineteen or twenty quarts. The milk from the famous cow, Blossom, required 19 quarts foı a pound of butter.

VITAL ACTION OF PLANTS.

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"There are some chemists, learned in the highest degree, who speak with confidence of pounded glass being used as manure; and another, eminent in his peculiar science, speaks of the power of a plant in its wonderful action of growth, to decompose the sides of the glass vessel in which it is grown, and appropriate portions for its nutriment. I believe it." (*Colman's European Agriculture, Part VI., p.* 11.)

It seems to us, there can be no question that living plants do exert a force similar to that above mentioned. This opinion, so far as held by the writer, was originally derived solely from actual observation; though he has since been much gratified to find it entertained by various individuals of acknowledged attainments in the science of vegetable physiology. We alluded to this subject in our June number, under the head of "Manuring by Green Crops," but advert to it again at this time, for the purpose of bringing forward the remarks of others in support of our own.

The theory to which we refer, is very appropriately spoken of in an article published in the Transactions of the Highland Agricultural Society, on the "Theory of Manures—their Agency as fertilizers;" by John Towers, Esq., a well known able writer. Mr. T. directs his remarks chiefly to an illustration of the *modus operandi* by which the decomposition of manures and their assimilation by plants is effected. He argues that the value of common animal manures, as the food of plants, consists in furnishing a source of *carbonic acid*—this substance being produced, in his opinion, "under the action of the roots of plants, or rather by their *vital principle*."

Mr. Towers had given this subject some consideration in a previous article, some portions of which he copies into the one to which we first referred. In the former article, he observes it is generally supposed that manures become the food of plants by "being *dissolved* in the moisture of the soil," the solution being taken up by the roots of the plants. He thinks this doctrine is involved in doubt and uncertainty. He admits it is difficult to ascertain precisely what part manures actually perform in the support of vegetables; for "it is quite certain," he says, "that not a single particle of the most impalpable powder can be made to enter into the vessels of the roots; and it is equally certain that water—boiling water—can dissolve only a very small portion comparatively of the most reduced spit-dung. But every observant gardener or farmer must have remarked that when manures are added to earths in due proportion, and not so as to glut the soil, the whole mass vanishes; and though for a time the earth be somewhat blackened, it gradually acquires its natural tint, and loses every trace of the decomposable substances which were added to it. Another fact is apparent, namely, *that under the stimulus of a vegetable crop, land frees itself from the manure sooner than if it were left to act solely by its own unassisted energy*."

In regard to the special agency by which these changes are produced, Mr. Tower remarks that "every particle of putrescent manure which is given to the earth must undergo a decomposition, which can only be induced by the play of chemical affinities, and those so powerful as to develop the elements of water, to re-form water; also the elements of hydro-carbons and of ammonia; and to model and incorporate all these so as to produce that specific crude sap, which is exactly appropriate to each individual vegetable.

"*Chemical agencies* involve electric induction, and water can only be electrically decomposed, as Faraday has shown, by the passing of a current. Now in the germination of seeds, water is decomposed, and new modifications of its elements effected. But to what prime motor cause are we to look as that which gives the first spark, or rather what the *medium* through which that elemental stream passes, which induces those mysterious decompositions and recombinations? * * * Admitting that the voltaic apparatus furnishes the type of the current, and knowing the electric condition of the atmosphere, what other agent need be sought? Manures *are* decomposed most rapidly under the action of a vegetable crop, and atmospheric electricity rushes through every pointed termination of the structure; we cannot, therefore, doubt the superior efficacy of a *bulk* of manures like those of the farmyard and fold, over the mere top-dressings and scatterings of guano or its representatives; as by the former it enjoys all the *direct* results of organic developments, and obtains a permanent fund of carbonaceous substances whence to derive an abundant supply of carbonic acid, whereas the latter may be considered as the *remains of laboratories already effected*, and therefore deficient in one of the chief requisites of vegetable nutrition."

EARLY VEGETABLES—DRAINING, &C.

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The earliest vegetables I have seen in Western New-York this season, were at Aurora, on the east side of Cayuga Lake. Here green peas were grown and eaten by the 30th May, stringed beans by the middle of June, and at this time, 1st July, new kidney potatoes are in tolerable perfection. On this day, I saw well formed ears of Indian corn, nearly eight inches in length, in the garden of Eleazer Burnham, Esq., but this has been an uncommonly early growing season, no frosts have interrupted vegetation on the margin of this warm lake, since the tenth of April.

Aurora presents the rare spectacle of a rural village with well-conditioned streets, side-walks, sewers, &c., without its almost universal accompaniment, *corporation taxes*. Here are side walks of smooth calciferous slate, beautifully level and square, laid with a care not to encumber the shade trees. It is true that the width does not exceed six feet, but this only proves the unpretending character of these villagers, who, perhaps, neither anticipate nor wish for an extensive population. The only truly ambitious house here, once struck me in painful contrast with the rural simplicity and floral beauty which adorned the others. But at this time its stately proportions are only seen through graceful circling avenues of deciduous and evergreen trees, and flowering shrubs.

From Aurora to Poplar Ridge, four miles east, the land rises six hundred feet; this rise is by a succession of low parallel ridges, and intervening swales. The soil is generally clay loam, with quartz and lime pebbles. The ridges are warm, first-rate land; the swales formerly produced good corn and grass, but as the light vegetable mould gave way under successive tillage, to the hard subjacent clay, vegetation suffered from surplus water. Almost every farmer who first settled this section, has sold out and gone west; so that the land along this road from Aurora to Poplar Ridge, is principally held by two or three wealthy families. One of these proprietors, Augustus Howland, an intelligent, enterprizing young man from New Bedford, has made many miles of open and blind ditches; in some places cutting deep and wide on the road side, and then leading the united surplus water into a deep gully running to the lake. It was both a refreshing and a novel spectacle in this champaign country, to see water running briskly through artificial ditches on the road side, on this first of July, with the thermometer at 90°; especially when we reflect that this water redeems thousands of acres from aquatic swales to good wheat land.

It is often said that so much land in the hands of a single man, is subversive of the ends of a healthy, busy, intelligent, democratic population. Be this as it may, great credit is due to Augustus Howland, morally and physically, for the personal vigilance and attention he gives to these great improvements.

Hessian Fly.—The Genesee Farmer says, "Taking Western New-York together, the loss from the fly alone will doubtless be at least 500,000 bushels. Late sowed wheat has escaped the best. William Garbutt, who plowed up 14 acres of wheat destroyed by the fly, to sow with oats, ascribes his loss mainly to early sowing, at or near the first of September.

FACTS AND OPINIONS

Condensed from various Exchange Papers.

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Potatoes.—H. N. Sherman in the Boston Cultivator, is led to conclude from experiments, that it is not very material what the size of the seed is, if the land is good. He planted well manured moist loam, in three ways. One piece had two middle sized potatoes in the hill; the next, one large one; and the third, one small one. The result was, the two potatoes in a hill produced many potatoes, but of small size. The one with a large potato in a hill, "produced less amount, but of larger size." The one small potato in the hill, "gave the least in amount but the largest and most even in size."

Guano for Peach Trees.—W. W. Mills, of Smithtown, L. I., says he applied guano successfully as follows:—The trees were on the decay, and nearly destroyed by the worm. The first of June, he removed the earth from the roots, destroying the worms, then sprinkled a handful of guano about the roots, wetting it afterwards by sprinkling water. The guano was then covered with a peck of pulverized charcoal to each tree, which was also wet thoroughly. "The trees immediately changed their color, grew astonishingly, and ripened their fruit in great perfection."

Length of Corn Roots.—As a proof of the importance of deep plowing, Ellsworth mentions the following fact. There are now in the National Gallery, corn roots taken from one side of a hill of corn laid bare by a freshet, sixty days after planting, some of the larger roots of which, covered with lateral branching roots, were more than four feet long. The aggregate length of all the roots in the hill, fine and coarse, were estimated at over 8000 feet.

Subsoiling and Manuring.—C. F. Crosman, of Rochester, says, in the Ohio Cultivator, "I raised 410 bushels of carrots on one-quarter of an acre; 550 bushels of potatoes on two acres; about 600 bushels of onions on one acre; and over 1000 bushels of beets, (several kinds) on three-quarters of an acre. I plow with a double team as deep as possible, and subsoil each furrow—adding plenty of compost manure."

Profitable Crops.—The following is the produce of 10 acres of land, for 3 years, belonging to Charles Tenney, of Riga, Monroe county, N. Y.

40 bushels of corn per acre, at 50 cts., ...	$200.00
30 " " wheat, " at 87½ cts.,...	262.50
2 tons hay per acre, at $10 per ton,.....	200.00
35 bushels of clover seed, at $7,.........	245.00
3 colts wintered on clover straw,........	25.00
	$932.50

The expense was estimated as follows:—Interest on land, $50 per acre, $105; manure, $3; plowing both crops, $20; seed, hoeing &c., $35; harvesting, $60; cleaning clover seed, $23. Total, $264; leaving a nett gain of $686.50, or $68.65 per acre.

Fruit Trees—Good Cultivation.—We have often spoken of the value of giving young trees, good mellow cultivation. The Boston Cultivator says that W. Flanders, of Woburn, set out a young orchard six years ago, on good rich land, and has since given it good but economical cultivation, by tilling and cropping. The trees are now from four to six inches in diameter. Some of the trees have already yielded nearly a barrel of fruit.

Large Tree.—Prof. Lindley, in his "Vegetable Kingdom," says, "Martius (a careful and accurate scientific traveller,) represents a scene in Brazil, where some trees of this kind, (locust) occurred of such enormous dimensions, that fifteen Indians, with outstretched arms, could only just embrace one of them. At the bottom they were 84 feet in circumference, and 60 feet where the trunks became cylindrical. By counting the concentric rings of such parts as were accessible, he arrived at the conclusion that they were of the age of Homer.

Cultivation of Peach Trees.—A great many farmers usually let their peach trees take care of themselves,—that is, suffer weeds and grass to grow round them, or to stand in meadows, pastures, or grain fields. Potatoes, being a low, hoed crop, have been found one of the most favorable; yet J. W. Thompson, of Wilmington, Del., who is well acquainted with the management of the great peach orchards in that state, says, "After the trees commence bearing, no other crop of any kind should ever be grown amongst them, as I have known two rows of potatoes between a row of peach trees, not only to affect the fruit, but seriously injure the trees." He adds that they should be regularly plowed three or four times in the season.

Cultivation of Orchards.—At a late agricultural meeting at the State House, Boston, Mr. Porter, of Danvers, stated that a few years ago, he had an old orchard of four or five acres, which had not been plowed for thirty years, which his neighbors said was worthless. He plowed it, manured it well, and took off a good crop of oats. He pursued the same course the two following years. The third year, he had seven tons of oats, cut before ripe for fodder, and two hundred and eighty barrels of apples. Previous to plowing, he did not get more than eight barrels a year. It may be proper to add, that although sown crops with manure, do well for full grown orchards, low hoed crops, only, as potatoes, beets, and turneps, will answer for young trees.

Salt for Plum Trees.—The Maine Farmer says, that P. C. Holmes of Gardiner, had several plum trees planted in a soft clayey loam, which had not borne any fruit for seven or eight years. In the fall of 1844, he strewed a quantity [how much is that?] of salt around the roots, and in 1845, they were full of fruit.

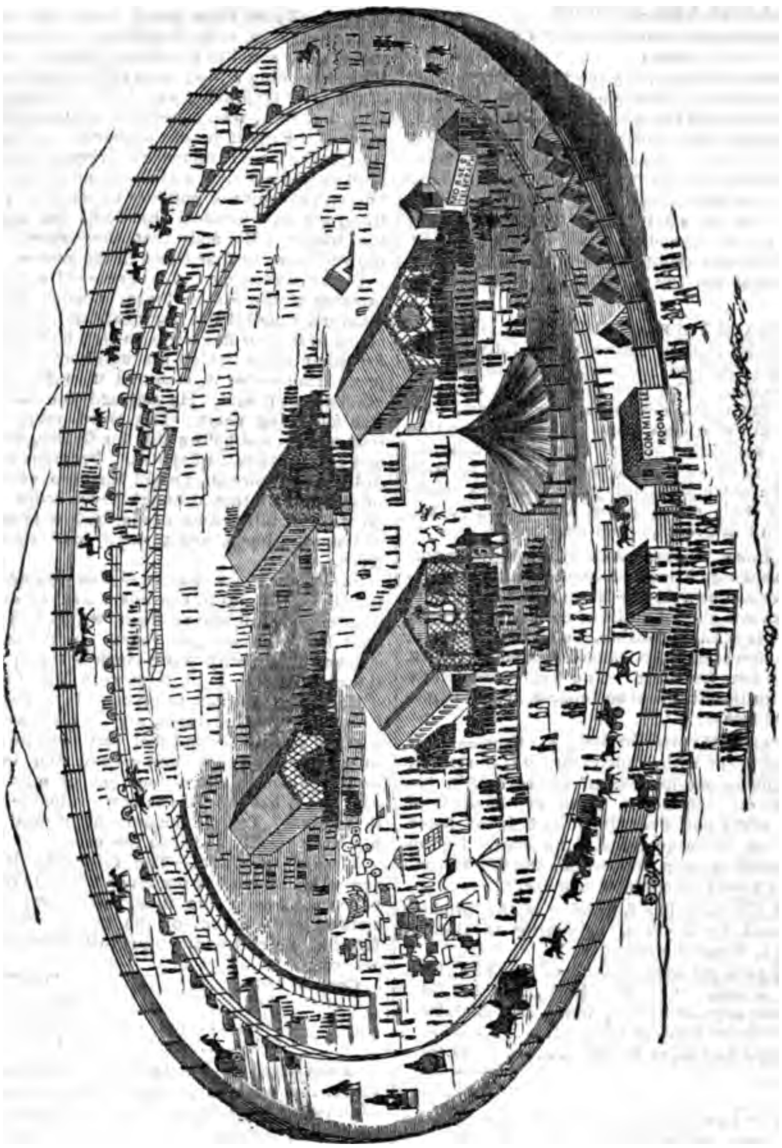
Corn Raised for Fodder.—D. S. Beers, Knox Co., Ohio, in Ohio Cultivator, says, "I plowed about three acres of swamp ground that had become dry, but was overrun with weeds, and sowed four bushels of corn on it. From this I cut ten tons of most valuable fodder, and it has proved the most valuable crop I raised this year." Tripple the amount of seed would probably have greatly added to the crop.

Wheat in Ohio.—The following is given as the aggregate amount of the several wheat crops for the state of Ohio, during the four past years; and shows very strikingly the extent of the impoverishing system of farming which too much prevails there as well as elsewhere.

Crop of 1842,...................	25,387,439	bushels.
" 1843,...................	18,786,705	"
" 1844,...................	15,969,000	"
" 1845,...................	12,000,000	"

Draught of Plows.—The London Ag. Gazette states, that upon an average, 35 per cent. of the labor of plowing is attributable to the weight of the implement, 55 per cent. to the operation of cutting the furrow slice, and only 10 per cent. to the action of the mould board. Hence more attention should be directed to lessening weight, and improving the cutting part, while the form of the mould-board should not be overlooked. The English plows, it is true, are usually heavier than the Yankee plows; but this estimate of the strength required for cutting must appear nearly correct, when it is remembered how much more force is required to thrust a spade through a tough sod, than merely to lift the weight of the earth removed.

Strong Women.—Henry Colman says, the most remarkable instance of strength and endurance is perhaps to be found in the fish women of Edinburgh, who attend market from a distance of more than two miles on foot. Their load of fish, in baskets, slung upon their backs, often weighs 150 lbs., and has been known to weigh 200 lbs. They stop to rest but once on the road, and after their arrival are found crying their fish in all parts of the town. "How many," asks Colman, "of the Chestnut-street, or Washington-street, or Broadway belles, would it require to lift even one of these loads from the ground?" He says these women are neat in appearance, of fair complexions, and not by any means bad looking.



VIEW OF THE STATE CATTLE-SHOW AT UTICA, 1845.—(Fig. 76.)

EXHIBITION OF THE N. Y. STATE AG. SOCIETY.

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We presume it is recollected by most of our readers, that the New-York State Agricultural Society holds its annual Show and Fair at Auburn, on the 15th, 16th, and 17th of the present month. The trial of implements will take place on the first day of the exhibition; the principal show of animals and articles on the second day; and the address with the report of various committees, will be made on the third day.

From the very favorable season, and the bountiful crops of almost every description, which have rewarded the husbandman's labors, we look for an unusually extensive and rich exhibition. In stock, especially, we shall be much disappointed if there is not a wider competition in every class, than there was last year. The pastures have afforded abundant feed, and cattle and sheep cannot fail to be in fine condition; so that their owners can not urge the excuse that they are kept at home because they are not in "high order enough" to show. We look, therefore, for a general turn-out.

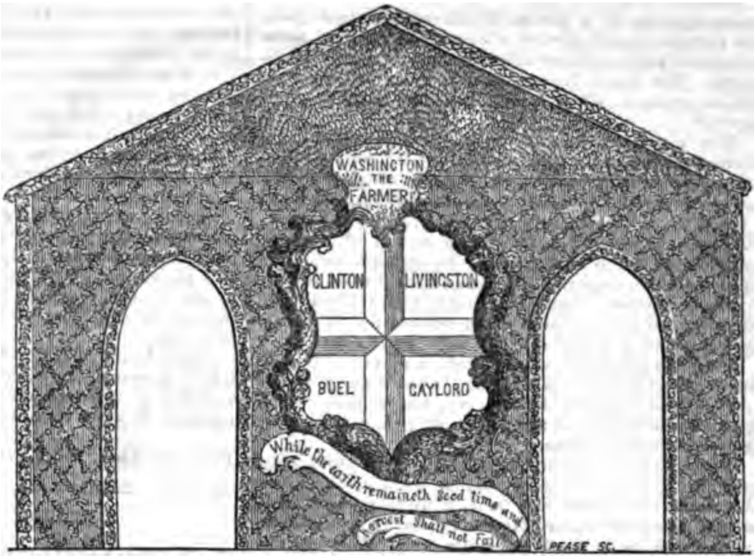
Besides the advantage of competing for the premiums, a strong inducement to take stock to the show is presented in the opportunity it affords of making sales or exchanges. This was carried on last year to a great extent, and we have no doubt with much advantage both to purchasers and sellers. In fact we believe this may be made one of the most important features connected with these exhibitions. We hope, therefore, that the principle of *Fairs* may be more generally entered into, and become fully established. Let it but be generally known that on these occasions large numbers of the best horses, cattle, sheep, swine, poultry, implements of husbandry, &c., &c., will be brought for the purpose of sale, and thousands from all parts of the country will attend with the view of purchasing.

Auburn, it will be recollected, is in the midst of a great fruit region. Perhaps no part of the state has made a more rapid improvement in all branches of horticulture, within the last fifteen years; and we expect that the amateurs of Western New-York will vie with each other in presenting such a display of the products of their gardens and orchards, as cannot fail be especially attractive.

We presume our Auburn iends have made good proress with their arrangements, nd that by the arrival of e day of exhibition, they ill be prepared to announce at "all things are now ady."

We give herewith, from e Society's Transactions of st year, a cut of the showround at Utica, and also an d view of "Floral Hall," ne of the buildings erected ithin the enclosure on that casion. The plan for the esent exhibition, which we w not long since, is well signed; and from a handme perspective drawing, hich was shown us, of the rounds, with the various ildings and fixtures, we ve no doubt that they will found as perfectly arranged d completed as on any former occasion.

The customary liberality of e Railroad Companies will no doubt be extended in ference to the transportation of stock and articles degned for the Show, and the usual facilities of low res, &c., for passengers, will be granted.


WASHINGTON THE FARMER
CLINTON
LIVINGSTON
BUEL
GAYLORD
While the earth remaineth Seed time and harvest Shall not Fail
PEASE SC.

FLORAL HALL.—(Fig. 77.)

JONATHAN'S ACCOUNT OF THE CATTLE-SHOW.

……

Did y'ever to the Cattle Show go?
What kicking, and pushing, and goring—
Cattle in pens—the pens in a row—
And *tarnal* great hogs, there, a snoring.

There's sheep too; ewes, and wethers, and lambs—
Some *Bucks;* (some are'nt *in pens* far's I know,)
There's sheep of the Dons—some Uncle Sam's—
Some Natives—some "real Merino."

There's a tug too, or trial of strength,
With hawing and geeing and scolding,
Just to twitch a great stone a foot's length—
"Haw! haw buck!—why don't ye!—gee golding!"

Then for plowing they give a reward,
And *cute* as a squirrel that burrows,
Off start the plows, cut through the green sward,
A turning the *slickest* of furrows.

And then sir, in a room that they've got,
There's an "ocean of notions" display'd,
There's blankets, and stockings, and—what not—
That the folks in their houses have made.

There's bonnets, both of straw and of grass,
And cloth too, of woolen and linen,
And there's yarn, and there's thread, smooth as glass,
That *gals* for themselves have been spinning.

There's hats, and there's shoes, and there's leather,
And there's—I can't tell half now, I fear—
Got a prize—gee ho! altogether!
And I'd go to the show twice a year.

Protecting Sheep from Dogs.—Put with the sheep few active cows with their calves, with a few two or ree year old steers. Then set a dog on the sheep, hen the cows to save their calves, will make a terrie war upon him, the steers joining pursuit. After a w such lessons the cows may be removed—the steers ill do their office. Sheep pasture being too short for ur year old steers, they may be successively removed, d younger ones added.

Cranberries.—Five hundred and seventy-five bushs were sent to Boston last year from the town of arshfield, and sold for $1,100.

Bugs on Squashes, are repelled by sprinkling a ixture of soot and sulphur on the young plants while et with dew in the morning.

KITCHEN CHEMISTRY—NO. III.

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STARCH.

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Starch exists in most plants, and in all parts of them. It may be obtained largely from different grains, and from the tubers of the potato. When the flour of wheat, corn, barley, or oats, is mixed with water, and washed in linen cloth with pure water, a milky liquid passes through, from which a white powder gradually settles in the form of *starch*.

It is procured in different forms or states from various other substances. In the form of Tapioca and Cassava, it is obtained from the root of the *Jatropha manihot;* in the form of Arrow root, from the *Maranta arundinacea;* and from the palm known as the *Sagus faranifera*, the Sago of commerce is obtained. In whatever plants it is found, it exists imbedded in the celular tissue in small white grains, which are globular, oval, and sometimes irregular in shape. Those of the potato, which are largest, and which may be easily seen by a microscope, are not more than 1-250th of an inch in diameter; those of the arrow root, which are smallest, do not exceed 1-600th of an inch. These grains are perfectly insoluble in cold water; each grain being formed by a number of minute concentric layers, like the coats of an onion, which become harder and tougher from the centre, the outer being so hard, that the globules resemble small bladders filled with a softer substance, and which protect the interior from the action of cold water. Hot water, however, causes these globules to burst, the starch is discharged, and thus it becomes soluble in hot water, except these outer layers or skins, which merely floating in the water, give it a peculiar opalescent aspect. If this solution be dried at a gentle heat, and then digested with cold water, these little films may be separated by a filter or fine thick strainer, and a transparent solution of starch obtained

The usual preparation of starch, consists, first, in breaking the texture of the plant by rasping or coarse grinding, but not so as to break the globules. Being then thoroughly mixed with cold water, the globules fall or are washed out of the ruptured cells, and are carried off by the current, without being dissolved, and from which they fall in a copious white powder, or in the form of a precipitate. When obtained from grain, the flour is employed; when from the potato, the raw tuber is washed, peeled, and grated; from the sago, the pith is used; and by a process similar to that used for the potato, arrow root is procured from the *Maranta arundinacea*, and the cassava from the Manihot. When the latter is dried by agitation in a hot place, it becomes tapioca, by a partial transformation into gum, and perhaps a small portion of sugar, all three of these substances being substantially the same in their composition. The starch from the sago palm undergoes a similar change, when it becomes the sago of commerce.*

The starch of commerce is obtained by mixing coarsely ground wheat in vats with water, where it remains two or more weeks, the starch settling to the bottom undissolved, and the supernatant liquor undergoing a slight fermentation, which separates some impurities. The sour liquor is then drawn off, and the precipitated starch washed in sieves, through which the starch in an an impure state, passes with the water. It is again washed, drained through boxes lined with linen or canvass, and afterwards stove-dried in paper, during which it cracks into prisms as usually seen.

From the protection afforded by the outer coating of the starch globules, this substance is but slightly affected in potatoes injured by the rot; hence the success which has attended the abstraction of potato-flour from partially diseased tubers.

Wheat, rye, and barley flour, consist of from one-half to two-thirds starch; Indian meal from three-quarters to four fifths; rice flour, more than five-sixths; oatmeal over three-quarters; buckwheat about one-half; and pea and bean meal not quite half. Potatoes are about three-quarters water; about three-fifths of the rest is starch.

SUCCESSFUL GARDENING—PRODUCE OF ONE ACRE.

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The capability of our soil is but partially understood. With skilful management, it may be made to yield great burthens and profitable returns, where good markets are available. A few days since, a person (I am not allowed to give his name for fear his landlord will raise his rent!) gave me the following as the produce of one acre of land within one mile of the capital, in 1845. The soil is a tenacious clay, and has been cultivated as a garden for many years, but never considered remarkable for its fertility.

It must be remembered that prices ranged high last year, which will account for the great amount received for the articles, viz., in round numbers:

100 bushels potatoes, sold at	4s.	$50 00
32 do corn in the ear,	3s.	12 00
65 do onions,	4s.	32 50
13 do carrots,	3s.	4 87
8 do parsneps,	4s.	4 00
7 do beets,	3s.	2 62
800 cabbages,	3c.	24 00
Horse radish, sold for		42 00
Fruit, do		10 00
Pigs fed on refuse of garden,		26 00
		$207 99

No manure was applied except what was made by the pigs; but the great produce is ascribed to the use of oyster-shell lime, at an expense of one dollar and fifty cents per year for three years. "It was wonderful," he says, "to see how the ground would heave and swell after every rain."

Lime, for agricultural purposes in this section, has not been very extensively used. Judge Buel tried some experiments with the Helderberg stone lime, but could never perceive any beneficial results from its application, and therefore abandoned its use. Probably if he had tried it in a clay soil, the results would have been different.

In Pennsylvania, Delaware and Maryland, lime has been pretty extensively used, and the lands have been nearly quadrupled in value in consequence. In advertising a farm for sale, as a recommendation, the amount of lime recently applied is particularly set forth, as well as the proximity of limestone.

It is not generally known, I believe, that a kiln for burning oyster-shell lime has been erected within a few years in the south part of the city by Mr. Warner and Sons, where it is afforded at six cents per bushel.

I am informed by the proprietors that their sales have increased very considerably for the past year, and their future prospect is quite flattering. Many of our farmers have been experimenting with lime, and appear well pleased with its operation. Several thousand bushels have been taken down the river to enrich the soil, and it is hoped that those who have tried it, whether successful or unsuccessful, will communicate the results through the medium of the Cultivator, for the benefit of others.

There is one fact, that has been communicated to me, which is entirely new, in regard to the action of lime, and that is, its effects are greatest in a lime soil or lime region. Can our chemists account for this?

C. N. BEMENT.

Bement's Amer. Hotel, Albany, Aug. 1846.

AGRICULTURAL STATISTICS.

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To the Editor of the Cultivator:

DEAR SIR—It appears to me that your correspondent J. L. H. has greatly over estimated, not only the extent of the error to which he refers in the agricultural statistics prepared by me, and published in your June number, and more fully in the volume of Transactions of the Society for 1845, but also the practical consequences of whatever errors there may be in that statement. The items furnished by me were taken from the official returns of the marshals on file in the Secretary of State's office: and in respect to the crops to which he refers, as well as that of wheat, no one, it seems to me, could well have failed to understand that the quantity harvested or the produce as returned had reference to the year preceding, and the number of acres under each particular crop to the present year; consequently, that in striking an average, it was upon the assumption, which I apprehend will generally hold true, that taking the whole county together, for a series of years, the proportions between the number of acres under each crop enumerated, and the quantity raised as there set forth, would not be found essentially to vary. If I am correct in this assumption, it appears to me that the approximation to accuracy, for all substantial purposes, is at least as great as it would have been, had it been practicable to obtain the average harvest of the crop actually put in. Be this as it may, I took the returns as I found them, and as they were directed to be made, not by the Secretary of State, as is erroneously and somewhat discourteously charged by your correspondent, but by the Legislature; and the averages given were a mere matter of mathematical calculation, which, if inapplicable or inaccurate, could be readily rejected. This portion of the bill, too, was drawn up by a practical farmer of Western New-York, who must have supposed the results to be secured under the arrangement given, of more value for reference than they would be under a different and more obvious classification. And certainly it must be obvious to "J. L. H.," as well as to every reflecting mind, that had the respective marshals, instead of being governed by the plain and perspicuous directions of the law under which they were acting, adopted the suggestions, however "profound" of every individual who felt qualified to offer his advice or "remonstrances" in the premises, these statistics would have been far more "worthless," than they are. Whatever may be their present defects, they are not of such a nature as seriously to mislead any who will give to them a careful and critical examination: whereas such a mixture of truth and error, as must have necessarily resulted from an arbitrary standard to be fixed upon by each marshal, under the "remonstrances" of friends or otherwise, would have been altogether intolerable.

As to the "dairying operations," I admit less reliance is to be placed upon the average yield per cow as stated; and it would probably have been better to have dispensed with this average altogether, as this is a branch of agricultural operations subject to more than ordinary fluctuation from year to year.

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* By a process not dissimilar, the starch of grains is converted into sugar by the saccharine fermentation in malting, and in germination; and starch is also converted into a brown substance, at a temperature of about 300 degrees, known as starch-gum, or British gum, which is used as a substitute for gum arabic by [illegible] in thickening their colors.

Very respectfully, your obt. servt.

S. S. RANDALL.

ROT IN POTATOES.

IN a late excursion to the eastern border of the state, and a portion of Berkshire county, Massachusetts, we paid particular attention to the condition of the potato crop. We found the evidences of the rot very general; the testimony is unanimous, that it is much more prevalent than it has ever been before. We saw but few fields that were not affected; but judging from the appearance of the tops, we should say that the crop was rather less injured on the whole, than it is in the immediate vicinity of this city. A few fields were still green, and so little changed that no symptoms of blight would be observed without particular examination. The crop on wet lands appears to be somewhat more affected than it is on dry land. So far, however, as regards the *first attack*, or the blight of the tops, not so much difference is discoverable; but the actual *rotting* of the tubers is less, as we should naturally expect, on porous and dry soils, than on those which are compact and wet. Dry earth, as well as other dry substances, by absorbing the superabundant moisture of the potato, lessens, of course, the tendency to decay; while moisture, on the other hand, increases this tendency.

Cause and Remedy.—This part of the subject, is, we think, no nearer settlement, than it was a year ago. We have long been convinced that the originating cause is atmospheric—farther than this we can say nothing. In the functions of vegetable and animal life, electricity undoubtedly exercises a potent agency; but whether the defect in this vegetable is owing to any unusual state or condition of this fluid, or to what particular combinations of elements it is attributable, are points yet open for investigation.

But if we are unable to assign the particular cause of the defect, it is some satisfaction to know what is *not* the cause Thus we are confident from the most minute observation, that insects have nothing to do with it. Worms, flies, and beetles, have, to be sure, been found on the stalks and in the hills of rotten potatoes; but this circumstance proves nothing in regard to the thousand cases where no such creatures can be discovered. We have examined, with glasses of ample power, both the top and the tuber, in all stages, from the first period that the defect is discoverable: but no traces of insects are to be found in common cases.

Again, we are satisfied that the idea of the defect being caused by a "want of alkalies in the soil," is an utter fallacy; because numerous instances have come within our knowledge where the application of alkalies has had no effect to lessen the trouble.

And as to remedies, if any have been found, they are certainly such as we have not heard of. Many substances have been recommended as "cures" or preventives; but when subjected to a *thorough* test, they have all, so far as we have learned the result, totally failed. Some have supposed that cutting off the tops would secure the tubers from rotting. We have spoken of this before, though with not much belief in its efficacy. Mr. JABEZ PIERCE, of New-Lebanon, has, however, made some very fair experiments, which show that cutting off the tops is of no advantage whatever. He cut the tops from some rows of potatoes before they were in the least struck by blight; he cut other rows as soon as the leaves began to turn, and others at a later period. In all cases, the rows cut were parallel to others of the same kind which were left uncut. In company with Mr. PIERCE, we carefully examined the potatoes in all the cases referred to. The proportion of rotten tubers was fully as great where the tops were cut, as where they were untouched, provided they were of the same kind. But some kinds were much more rotten than others. Thus the Mercers, (called also in some sections "Neshannocks," and in others, "Chenangoes,") were in the worst condition. We found this to be generally the case, and that the variety called Carters, were next to the former most affected. The flesh-colored potato, (Scotch-greys?) some of the round blue kinds, and the Long-reds, (Merinos) were more sound; and in some instances the last-mentioned kind appeared entirely unaffected, when growing by the side of Mercers that were at least half rotten.

One word more as to the insect theory. We do not believe that any new species has been discovered, or that there is any unusual prevalence among potatoes of any kind before known. To find both the top and bottom of potatoes eaten by various insects, is no new thing; for more than thirty years we have observed them. We cannot here go into a minute description of the different species, nor is it necessary that this should be done. The fact that the ravages of no insect have ever been known to produce such consequences as are now witnessed in potatoes, is sufficient. But it is contended that insects have been found in the affected stalks and in the decomposing tubers. This is not denied, but it no more proves that the insects *caused* this decay, than that the maggots and carrion-beetles in the putrifying carcase of an animal, caused its death!

THE STRAWBERRY,

WITH FIGURES AND DESCRIPTIONS OF FIVE VARIETIES.

THE ease with which every farmer may obtain this delicious and valuable fruit, should induce him to supply himself with all he wants. It is true we are at this month of the year abundantly furnished with peaches, plums, and pears; but the strawberry comes by the first of summer, even as far north as Albany, when nothing else is to be had. Why then should any one let the privilege escape of enjoying a plentiful supply? Now is the time to move in the matter and set out the plants.

Downing speaks of this fruit like a man who knows it well, when he says, "Ripe, blushing strawberries, eaten from the plant, or served with sugar and cream, are certainly Arcadian dainties with a true paradisical flavor, and fortunately they are so easily grown, that the poorest owner of a few feet of ground may have them in abundance."

Very few, comparatively, among the mass of our land owners, have undertaken the culture of the strawberry; and of those who have, many have partially failed from two causes, namely, neglecting good, rich, clean, and thorough cultivation; and neglecting to procure fine and productive varieties. As many bushels of strawberries as of corn, may be raised on an acre, and at an expense not very much greater. If it were not so, the strawberry culturists of Cincinnati could not afford to pour into that city their hundreds of bushels, at a price of three to five cents per quart. One distinguished cultivator there raised at the rate of *five thousand quarts* per acre; and another, who is the most extensively engaged in the business, brought into market *four thousand quarts* in a single day. The fortieth part of an acre would afford a large family a most abundant supply during the strawberry season.

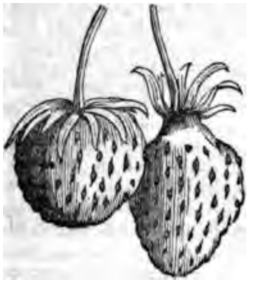
A great deal could be said on the cultivation and management of the strawberry. It may perhaps be sufficient here to state merely, that this plant, to flourish, requires, like most other plants, a good, rich, mellow soil; and like nearly all other plants, the soil for it must be kept clean and well cultivated. Who would expect to see a good crop of corn or of potatoes, from a promiscuous growth of these plants with weeds and grass? Strawberries should be planted in straight rows, about two or two and a quarter feet apart. These rows are as easily kept cultivated by *a horse*, as rows of potatoes or carrots. The runners, as they form, must be treated precisely as weeds, and kept hoed down, or at least should be hoed three or four times a year. With such management success can be scarcely doubted.

Once in three years the runners may be allowed to fill in between the rows, and the old rows demolished, new ones being thus obtained without planting.

The soil should be kept rich by yearly additions of manure in autumn.

The plants are usually set out in spring, and at the end of summer, or early in autumn.

VARIETIES.—The following are *among* the best. The figures were in all cases taken accurately from specimens of fair size, under ordinary good cultivation; the common error of representing larger than reality being strictly avoided.

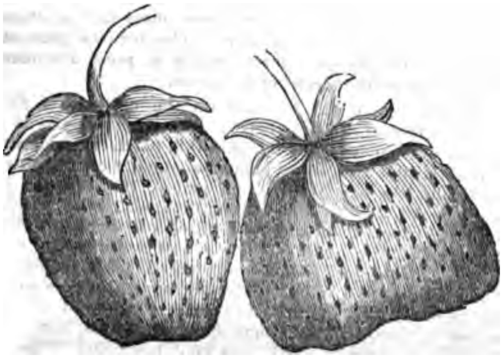


Duke of Kent.—(Fig. 78.)

Duke of Kent.—The earliest of all strawberries, and valuable on this account. The fruit is small, being rarely more than three-quarters of an inch in diameter, varying in shape from roundish or round-ovate, to long-ovate with a neck; seeds sunk in cavities with intervals usually sharply ridged. Color, bright scarlet, becoming dark scarlet. Flavor, a clear rich acid, and good. A good bearer. Many judges regard the flavor of this strawberry as equal to that of any other variety, but its *quality* appears to be underrated on account of its *small size*, the latter being the chief drawback on its value, and unfitting it for the market. It ripens the latter part of 5 mo., (May.)

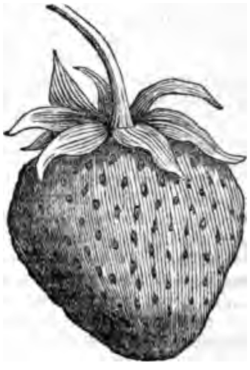
Large Early Scarlet.—(Fig. 79)

Large Early Scarlet.—This variety ripens a very few days later than the Duke of Kent, and is about twice its size, and equal in flavor. It is probably the most valuable of all very early strawberries. Fruit round-ovate, sometimes very slightly necked; calyx on the ripe fruit always showing the perfectly formed and adhering stamens; surface slightly irregular, the seeds often deeply sunk in cavities, with sharp projecting intervals. Sometimes the fruit is slightly flattened towards the stem. In thick beds, the color is bright scarlet, but dark scarlet when growing more thinly. Flavor rich and fine, much resembling that of the Duke of Kent, but with the addition of a just perceptible shade of astringency. The flowers are always perfect, and it is an abundant bearer.



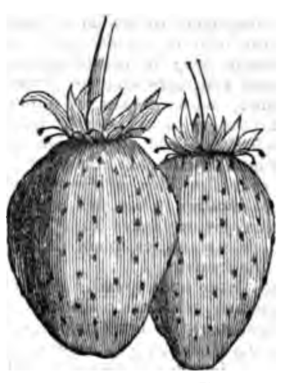
Ross Phœnix.—(Fig. 80.)

Ross Phœnix.—Its large size, fine flavor, perfect hardiness, and great productiveness, may perhaps entitle this variety to rank as high, if not higher, than any other strawberry of large size for the northern states; though a further and more general trial may be needed. It was raised in 1837, by Alexander Ross, of Hudson N. Y. Fruit very large; with common culture, four of the berries usually weigh an ounce, and they are about an inch and a quarter in length, and not far from the same in width. Form generally more or less coxcombed or flattened, but not always, varying considerably, and with the surface more or less uneven. Seeds numerous. Color, dark crimson. Flavor and texture very fine for a large variety. It ripens about the middle of 6 mo., (June.)



Hovey's Seedling.—(Fig. 81.)

Hovey's Seedling.—This is one of the finest of all the large strawberries, and is usually considered as perfectly hardy for the northern states. Several cultivators, however, in Western N. York have had their plants injured or destroyed by winter, especially on moist or heavy soils, when the Early Scarlets and Ross Phœnix have entirely escaped. Hence a covering of straw or evergreens in winter has been found useful, though in most cases they may be unnecessary. Fruit very large, roundish conical, regular in form, sometimes with a very slight neck. Color, dark red. Texture and flavor very fine for a large variety. Ripens about the middle of 6 mo., (June.) The stamens are small and imperfect, and hence it becomes much more productive if planted near some variety with perfect stamens, as the Early Scarlet or Ross Phœnix, or by the occasional intermixture of rows of these productive varieties. It thus becomes an abundant bearer. The fruit, with common good culture, weighs about a quarter of an ounce, and is about an inch and a quarter in diameter.



Prolific Hautbois.—(Fig. 82.)

Prolific Hautbois.—This is considered as the only variety of the Hautbois worth cultivating.—Most persons will probably regard it as inferior to the sorts already named, though some esteem its peculiar, rich, and musky flavor, as much better than that of any other variety. Fruit large, ovate-conical, light purplish red at first, becoming dark purplish red; surface rather regular, seeds projecting. Weight about one-sixth of an ounce. The leaves are of pale green, and of large size, and the whole plant of luxuriant growth. This variety is a great bearer, and ripens about the middle of the sixth month.

STEEPS OF AMMONIA FOR GRAIN.

WE prepared in 1844, a solution of the sulphate of ammonia from the carbonate, according to the directions found in the new series of the Cultivator, vol. 1, page 281.

In the solution we put one bushel of wheat, one-half of which soaked ten hours, and was sown October 5th, and germinated fairly.

In the following spring it had the appearance of being a little greener than the remainder of the lot, but at harvesting there was no material difference.

The remainder which soaked two days, was put, just before sowing, into a bucket that contained a very little lime, which totally destroyed the germinating powers of the grain.

We saw a piece of wheat near Warren, Pa., in the spring of 1845, the seed of one acre of which had been soaked in a solution of the sulphate of ammonia, and was then more than twice as large and thick as the remainder of the lot.

We soaked a bushel of oats in a solution of a pound of the muriate of ammonia and rain water for forty hours, and sowed on a black muck loam, with hard-pan subsoil, but there was no perceptible difference in the crop, which might be owing to the dry weather.

Some corn soaked in a solution of the same kind, grew with great rapidity. D. H. Wright.

Moscow, N. Y., 1846.

REMEDY FOR SMUT IN WHEAT.

……

Mr. Tucker—To ascertain the most effective remedy for smut in wheat, we tried the following experiments in 1841:

Ten square rods of sandy loam land we divided into six equal beds. Upon each we sowed three-fourths of a quart of wheat.

No. 1. Sown with smutty grain. Yield, 2½ quarts. One smut ball to 19 grains.

No. 2. Sown with smutty grain, or rather, a very few balls of smut, the grain being quite clean. Yield, 5½ quarts clean grain, and a pint of screenings. One smut ball to 168 grains.

No. 3. Smutty grain washed in lime water and brine. Yield, 4¼ qts.; one pint screenings. One smut ball to 176 grains.

No. 4. Smutty grain washed in lime-water and brine, and plastered. Yield, 4 qts. clean grain. One smut ball to 74 grains.

No. 5. Smutty grain washed in lime-water and brine, and limed. Yield, 7 qts. clean—one gill screenings. One smut ball to 1120 grains.

No. 6. Smutty grain washed in lime water, brine, and ley, and ashed. Yield, 7 qts. clean, one pint screenings. One smut ball to 840 grains, and the largest growth of straw.

Soaking wheat in brine and liming it before sowing, we have found to be as good a preventive against smut as any which we have used. D. H. W.

NAMES OF FRUITS.

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Mr. Tucker—Having been but a few years engaged in the study of horticulture, no one point has struck me as more deserving attention and censure, than the practice of disseminating fruits as new and distinct, before they have been fruited and carefully compared with varieties already known. To this point my attention has been more particularly drawn from seeing advertisements of a strawberry under the name of "Willey," passing around the country. This variety, it is stated in these advertisements, is entirely "*new* and fine, great bearer," &c.; and a price for the vines is placed in accordance with its supposed value.

In order to correct the error relative to this variety being "new and distinct," permit me to give its history, and then the variety to which I judge it to belong.

Some eight or ten years since, a lady from this city, who pays great attention to procuring new varieties of fruits and flowers, was in New-York, and visiting a nurseryman's garden, purchased among other things two varieties of strawberries which he represented as of great value. These were brought to this city, planted out, grew, and fruited, but by some accident the names of the varieties got lost. After the vines had made runners, this lady gave some of each to Mrs. Willey, of this city, and by the latter lady they were generally distributed. As time progressed, and the fruit came into market, some amateur cultivators here, pronounced one variety to be the "Methven Scarlet," but having few varieties with which to compare, they were unable to determine the true name of the other, and therefore, out of compliment, they named it the "Willey." Under this name the vines have been distributed far and wide, to Cincinnati, into Kentucky, where it has been advertised as a *new* variety, and also to Boston, where I observe, it is brought forward by a nurseryman there, as something new. At this latter I am the more surprised, as this nurseryman is a member of the Horticultural Society there, and I had supposed the society would have examined carefully this, as they should all new named fruits, and corrected the error in early season.

In fruiting this variety with the "Hudson," cultivated at Cincinnati, and described by Mr. Longworth, I can see no difference; but it is not the "Hudson" of Mr. Downing.

The variety "Methven Scarlet," has been disseminated from this section under the name of "Keene's Seedling," "Downton," and of "Stafford's Mammoth." It is a variety which, once to see, is always to know; yet it may come into cultivator's hands, under the latter name as something new, and ere it has fruited and been examined as it seems requisite, may be offered for sale. E.

Cleveland, *O.*, *August*, 1846.

SINGULAR FRUIT.

……

Mr. Editor—I saw a few days since, a very remarkable kind of fruit growing in the garden of Daniel Payne, Esq., near Warrenton, Virginia, to which I would be glad to call your attention.

The appearance and taste of the fruit put me entirely at fault as to its nomenclature. It resembles in form and size the English plum. Its color is a pale yellow; its taste partakes of the purple plum and May cherry. In some of the fruit—all taken from the same branch of the tree—the taste of the cherry predominates, in others that of the plum,—giving it a rare and delicious flavor. The stone is very much like that of the cherry, but rather more oval.

It is clearly a hybrid fruit of the most anomalous sort. The trees on which it grows are unlike any I have ever seen, with thorns like the damson, and leaves like the peach tree or wild cherry. These trees grew from the seed (carefully planted,) of the large Flanders cherry,—itself a peculiar fruit, and much the finest species of cherry known. They are about five years old, and have borne for two seasons past, though not abundantly.

Being an indifferent horticulturist, I have ventured to send you a description of this remarkable fruit, hoping you may know more about it, and that you can assign to it a "local habitation and a name." My own theory in regard to it is, that the flower of the Flanders cherry tree became *impregnated* by the pollen of a neighboring plum tree. I can account in no other way for so nondescript an offspring from the Flanders cherry.

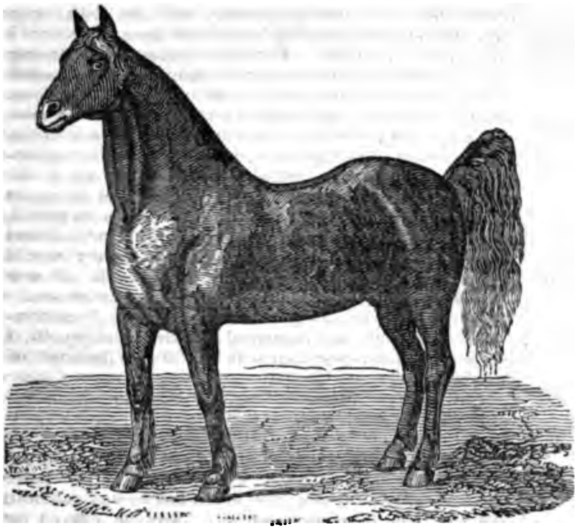
Yours, &c., P.

Warrenton, Va., July 18th, 1846.

SEEDING WITH CLOVER.

……

It may not be known to all farmers, who raise their own clover seed, that the straw, after threshing, contains enough seed to give a thick seeding to the land, if spread over the surface. Dr. Cook, of Sodus Point, N. Y., pursues this practice very successfully. He spreads a thin coat of the straw over the ground as soon as it is harrowed, which does not injure, but rather benefits the grain, as it comes up through the straw, which afterwards decays. The seed vegetates well, and affords a very thick growth of clover, or to use the Doctor's own words, "as thick as the hair on a dog's back."



THE GIFFORD MORGAN HORSE.—(Fig. 83.)

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Of this noted horse we give the following desription (which we have no doubt is entitled to confidence,) in the language of the owner.

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The Gifford Morgan, of which the above figure, taken from a daguerreotype miniature, is, in general, an accurate representation, is of a bright chestnut color, fourteen hands and three inches high, weighs about 1000 lbs., and in his form and qualities, is said by those who have been well acquainted with both, more nearly to resemble the original Justin Morgan horse than any other horse they have known. His gait is short and quick, he has great nerve and action, and is full of courage and endurance. His style of motion is very much admired. As a road horse he is not excelled, and is regarded as the best saddle horse of the Morgan family. He is remarkable for the great uniformity with which he stamps upon his stock, and through them upon their descendants, the fine, peculiar qualities of the Morgan race. The patronage he receives from intelligent breeders is as full as is desired, and all who see him freely acknowledge his great merits.

Among the celebrated foals of this horse, can be named the well known trotting pony of Horatio Sargeant, of Springfield, Mass., sold to Mr. Wood, of Providence, for $1,000, making time, a mile, in 2m. 30s. The chestnut horse of Robert Abel, of Pawtucket, R. I., going in 2m. 40s., and was sold for $600. The noted Beppo, making time on the Centreville track, 2m. 32½s. Many of his foals are yearly purchased for the southern market, as far south as New-Orleans, and some have even been taken to England.

The sire of the Gifford Morgan was the Woodbury, or Burbank Morgan, and his grandsire the Old Justin Morgan horse, whose pedigree is given in the last January number of the Cultivator. The sire of his dam was got by the old Justin Morgan, as also was his great grand dam. The Gifford Morgan has, therefore, seven sixteenths of Morgan blood, while no Morgan horse (except the old Justin Morgan himself,) has ever been more than half blood.

I intend to exhibit the Gifford Morgan at the show and fair of the State Agricultural Society, at Auburn, in September next, accompanied by a six years old stallion of his stock, closely resembling him, and a very perfect animal. The latter is for sale, but the Gifford Morgan is not. **Frederick A. Wier.**

Walpole, N. H., Aug. 10, 1846.

Dig wells in autumn, while the springs are low, and you will be less likely to want for water.

IMPROVED HUSBANDRY.

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Mr. Editor—I read with very great profit and pleasure, your notice of the successful farming of A. Van Bergen, Esq., and especially that part of it which related to his "*land under cultivation.*"

Agriculture, for its future advances, must be largely indebted to the same inventive genius by which the industrial results of manufactures have been so immensely increased. As the wheel has given place to the spinning jenny, so must the hand hoe be supplanted by the improved plow, the cultivator, and the spring-toothed horse-rake. When we say that "spade labor is the perfection of husbandry," we should be understood to mean that the results produced by the spade are in themselves perfect, while the instrument itself, as the means of producing those results, must be confessed to be primitive and rude. The true perfection will be the production of the same high tilth by labor-saving machines, and a consequent freeing of farmers, in a great degree, from that dependance upon servants, the expense and vexation of which constitute the most annoying feature in their occupation.

When Mr. Van Bergen, by the aid of his improved implements, cultivates forty acres of corn in the best manner, with the labor of a man and boy, he has made a large stride in practical husbandry which many of his brother farmers would like to follow him in. To enable them to do so, they must rely upon you to give them a descriptive account, with suitable cuts, of his implements, and of the manner of using them. Will you not assist them? **George W. Dobbin.**

Elk Ridge Landing, Md., Aug. 12th, 1846.

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Note.—We have before stated that we shall endeavor to give cuts of some of the implements referred to as soon as practicable.—Ed.

Moths.—Mr. **Baker**, in a lecture on insects, lately delivered before the London Farmer's Club, stated that the ravages of the common woolen moth may be entirely prevented in the following manner. He said—"You have nothing to do but to place shallow boxes in your drawers, with a little spirit of turpentine in them; and as the turpentine evaporates and penetrates the cloth, the larvæ will protrude, and be found dead on the surface."

Turnep-Fly, (*or Flea.*)—In the same lecture from which the above is taken, Mr. **Baker** spoke of the turnep-fly. He thought the only mode of effectually combatting these insects, is to make the land so good that the turneps will grow so fast as to render it difficult for the flies to accomplish their purpose. It is with them as with us: If dinner were provided for twelve, and twenty-four came to partake of it, there would not be much left; but if, on the other hand, dinner were provided for twelve, and only six came, there would be plenty left. It is the wisest way to sow a large quantity of seed in alternate rows, at different times. For as these insects appear to like the youngest best, you may thus save one row at the expense of another. We have known a crop of Swedish turneps, (ruta baga,) saved by sowing the seed of the common white flat turnep with it. The white turnep starts first and its leaves are tender and sure to be preferred by the insect, which therefore permits the ruta-baga to grow unmolested. Mr. B. recommended strewing common road-dust on the plants when they are wet with dew, to keep off the fly, and says it is found that they will not touch any of the plants on which the dust has fallen. We have used with good success, plaster of paris for the same purpose, and also ashes; but there is danger that the latter may be too strong for the plants. He thinks the same object may also be accomplished to a great extent by hoeing, as that operation scatters dust more or less on the leaves, and those which get most dirty are most apt to escape.

FARMING AMONG THE HILLS.

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In the early part of last month, we made a short excursion among the farmers of New Lebanon and vicinity. Our first stop was with Mr. M. Y. Tilden, to whose kind attentions, and those of Mr. Benj. A. Hall, we are indebted for an introduction to several of the good farmers of New-Lebanon, Stephentown, &c. We give the following brief notes of the principal objects which attracted our attention.

Wool Growing.—This is carried on to considerable extent in this section. On the farm of Mr. Tilden, and brothers, there is a flock of 1,300, mostly of Saxon blood. We saw the fleeces of this years' clip, which are not yet sold. They are generally of fine quality, and are put up in very good order, being well cleansed, and of almost snowy whiteness. The average weight this season, was 2 lbs. 12 oz. per fleece. The largest fleece was that of a buck—6 lbs. The best buck, however, is a three-year-old one, bred by Mr. C. B. Smith, of Torrigford, Ct., the fleece of which weighed 5¾ lbs. He is a beautiful buck, and his wool is excellent, being fine, of good length, handsomely curved, white, and of very uniform quality over the whole body.

Messrs. Tilden have about 800 acres of land; 300 acres comprise the home farm, and the remainder is wood, and mountain pastures.

The farm is managed chiefly by a tenant, Mr. Nelson Tanner, who is also a joint owner in the sheep and other stock. Wool is considered the staple product, and no more stock of any other kind than sheep, is kept than is necessary to manage the farm; at present there are kept 5 horses, 4 oxen, 6 cows, and 3 young cattle. The produce of hay is from 200 to 250 tons, annually.

Mr. Tilden's barn is sufficiently large to hold all this hay, and at the same time affords ample shelter to all his sheep and other stock. It is our intention to give a more particular description of it next month.

In company with Mr. Tilden, we visited the mountain on which are his principal summer ranges for sheep. It is an elevation of some 1600 feet above tide water; presenting a rocky surface, and rather thin, moist soil, but producing a tolerable quantity of very sweet and nutritive herbage. It appears to be, on the whole, well adapted to sheep, and they are generally healthy here. The heat is never intense, and the air is very salubrious. We were on the summit at 11 A. M., and while the people in the valley were sweltering with heat,—the day, (7th Aug.,) being one of the hottest of the season—we found ourselves most comfortable under closely buttoned coats. But the purity and bracing tendency of the air, was most delightful, and with a landscape view of surpassing beauty and great extent, amply compensated us for the toilsome ascent.

Mr. C. W. Hull, of New-Lebanon, has a flock of about 300 choice fine-wooled sheep. He has been considerably noted as a breeder of fine sheep for several years. In 1844, he received the first premium on Saxon bucks, at the N. Y. State Ag. Society's Show, at Poughkeepsie. His sheep are of small size, but of very uniform character, and show that very close attention to the quality of their wool, has been bestowed in breeding. We did not see his wool—it is at the Wool Depot, at Kinderhook; we believe it has heretofore sold for about 60 cents per lb. His fleeces are, however, light, averaging this season but 2 lbs. 9 oz. We would suggest to Mr Hull the propriety of endeavoring to increase the weight of his fleeces without losing fineness. We are perfectly satisfied that this is feasible. We think three pounds per fleece is readily attainable, without the least deterioration of quality. Mr. H. has no bucks which are more than a year old last spring. They are too young for their quality to be judged of with confidence—especially just after having been shorn; but some of them appear to be excellent, both as to quality of wool and shape of carcass.

Dairying.—An example of very profitable dairy management was shown us on the farm of Mr. Hall, (whose name we have above mentioned.) Mr. H. has a farm of about 200 acres—mostly hill-land, but moist, and affording good pasturage. He keeps 24 cows, (or rather has that number in milk—we think he has some *dry* cows.) He makes butter, which is sent regularly to Boston twice a week. He has an established customer for it in that city, who takes the whole, and allows such a price as the quality and the state of the market will justify. The average this year has been twenty cents per lb. It is put down in firkins, which hold 20 to 25 lbs. each. The firkins are made of well seasoned spruce, clear of sap, firmly put together, and neatly turned, in the manner of what are called the Shaker pails. They are altogether a neat article. They are obtained in Boston, and as we understood, are manufactured in Maine.

Ground rock-salt is used at the rate of about one oz of salt to one pound of butter. This kind of salt is considered better than any other, and far preferable to the western salt. If the butter is designed for long-keeping, a small quantity of loaf-sugar, (say half an ounce to the pound of butter,) is added to the salt and worked in. No saltpetre is now used at any time—former practice having demonstrated its uselessness, if, indeed, it did not actually injure the butter.

The cream is churned while it is sweet, or at farthest before anything more than a very *slight* fermentation occurs. Great care is taken to extract the buttermilk, and for this purpose the butter is thoroughly worked with a brake, of somewhat similar construction to the ones described in our June and August numbers. The cream and the butter are kept in a refrigerator.

In connection with the dairy, Mr. Hall keeps swine to good advantage. They are fed with the skimmed milk, with some vegetables, peas, and a little grain at the last period of fattening. They are kept wholly in pens, with small yards attached, for the purpose of making manure. He sold last year over $300 dollars worth of pork. This year he has adopted a different course which will prove more profitable. He sends off his pigs via. railroad to Boston, when they will weigh from 50 to 75 lbs. each, dressed, and gets for them at Brighton, eight cents per pound, dead weight. This is the course except with a few grown hogs, which are designed to make pork for home consumption.

Mr. Hall's cows are evidently good milkers. They are mostly of the common breed of the country, but have been *selected*. Several have a dash of the Durham blood in them, and one is a full-blood, from Connecticut. The whole lot, including several heifers only two years old, averaged 8 pounds and a fraction per week, in June last, on grass feed only. Mr. H. is confident that they will this year reach an average of nearly 200 lbs. to each cow.

We should have mentioned in the proper connection, that the churning is done by horse-power—from 60 to 75 pounds being churned at once. The churn used is on the model of Galt's, and the power is a horizontal wheel, on which the horse stands.

The winter food for the cows is chiefly hay; though it has heretofore been Mr. Hall's practice to give them some potatoes towards spring. He prefers the potato to any other root, but since it has been so much injured by the rot, the carrot has been resorted to as a substitute. It seems to be the general impression that the carrot is the best root to take the place of the potato in feeding stock; in this we also concur, and are gratified to see the culture of this vegetable extended.

We shall continue our notices in future numbers.

STATISTICS—BEANS.

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Mr. Editor—In the statistics of the Agriculture of your state, recently published, of the article Beans, it is reported that in two or three cases, *over one hundred bushels have been raised from an acre.* Several of the readers of my paper have expressed to me their doubts as to the correctness of these figures; and if correct, they are very desirous of obtaining further information on the subject—as to the kind of beans, quality of the soil, mode of cultivation, &c. Perhaps if you would ask for this information through the Cultivator, it would be furnished.

M. B. Bateham,

Columbus, Aug. 8, 1846. *Ed. O. Cultivator.*

THE POTATO ROT.

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Mr. Tucker—We regret to say, though the general features of the season have almost given us the assurance that such would be the case, that this disease has again, thus early in the season, made its appearance. When a calamity of such general consequences, falling as it does upon every class of citizens, though perhaps most severely upon the poor, is spreading its fearful ravages abroad, it surely presents a worthy subject for the investigation of the curious and observing,—while at the same time, caution should be used not to mislead the public by offering them mere conjectures and vague theories, which cannot stand even the test of hasty investigation. We make these remarks, knowing that from the very nature of the case, and the general predisposition of the mind to originate *something new*, that many opinions in regard to the matter will be originated, and that every paper will be filled with suppositions often hastily originated, and as vain as they may be premature.

As facts in the case are what we wish for, in order to be able to render just and true judgment, and come at conclusive causes and remedies, we would suggest that all writers on this subject, and there is no doubt but there will be a host of them, should be specific in their remarks, and so far as circumstances will permit, answer the following queries, viz:

What has been the general state of the weather as it respects evenness of temperature, and wet and dry? Have there been many showers, followed by immediate and scorching sunshine? At what time did you notice the first operation of the rot this season? What was the soil in which it first discovered itself—the location as respects streams, and low, foggy lands, and its exposure to atmospheric influences, especially the north? What kinds of manures were used, and how were they applied? What substances were employed at planting, and other times, to prevent the rot, and what was the effect? What kinds were earliest, and most affected,—and did those early or late planted suffer most? What was the progress, as regards soil, &c., of the disease from when you first discovered it until its ravages ceased? What preventives were tried after it made its appearance, and with what success?

It appears to us, that by bringing facts which the above suggestions are calculated to draw out, before the public, much light may be gained on this subject, on which so many contradictory theories are now afloat, and we believe, in good faith, that light will come, and with such influence that it will enable us to counteract this sad disease. The mooted supposition that insects are the cause of it, we think may be safely abandoned, for we have already examined one or two fields where the rot was doing a sad work, and where the vines exhibited less of the labors of insects than they did at harvest time last year, when we had no rot.

Richmond, Mass., Aug., 1846. W. Bacon.

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[We have received of Dr. I. Ward, of this city, the following detail of facts in reference to the potato rot, as exhibited on his farm, situated in the easterly part of New-Jersey.]

Last season I planted the common or Philadelphia Mercer, and the *Maine* Mercer potato, the former on dry, the latter on low land; both were planted late; the *Maine* Mercer on the low land suffered severely from the rot, while the other escaped.

This spring, I used for seed the common Mercer, which escaped altogether the rot of the last season. Contiguous to them, side by side, I planted *Hall's Early Junes*, a very prolific and early kind. I found, upon examining a number of hills in adjoining rows, the Mercer so much affected as to diminish the crop at least one-third, while the Early Junes had entirely escaped the blight. On the other side of the same field, the land being equally dry and elevated, I planted the Pink-eyes, which I found had suffered somewhat; here and there a potato gave evidence of the disease.

I ought to remark, that on the first of August, the time of my observations, the vines of the Early Junes were dead, the potatoes having *ripened* many days previous, while the vines of the Mercer and Pink-eye were beginning to decay.

On another field, where the *Maine* Mercer suffered from the blight the previous year, I planted Hall's Early June, the Carter, Pink-eyes, and Scotch Greys; but as this crop was later by three weeks than the other, I cannot confidently predict their escaping the rot; but as yet I could discover no evidence of its existence; possibly I should also except the Early June, as the vines on this field were also drying up, the potatoes appearing ripe and sound.

The late crop, which has not up to this time, the 8th of August, exhibited any evidence of the disease, I manured with muck and lime, in the proportion of 8 parts of muck to one of lime. A part of the early crop, which suffered from the rot, was manured with muck and lime, the other part with muck composted with yard manure. On the portion where muck and lime was used, the blight was not as destructive as where muck and yard manure was used; so marked was the difference, that I am constrained to regard the action of the muck and lime as a preservative, if not a preventive of the disease, and have determined to use double the quantity of lime in preparing my muck for future crops.

On three farms, similar in the character of the soil, and contiguous to mine, and the only ones respecting which I obtained definite information as to the extent of the rot, the crops suffered far more than mine, especially the Mercer. How far the blight in my field was controlled by the character of the manures, I have no means of determining.

The Mercer has long been known to be a feeble variety of the potato, possessing so little strength of character, as to require a combination of favorable circumstances to ensure a crop.

The conclusion to which I have arrived in the review of these facts, is that the Mercer, from the feebleness of constitution, is particularly exposed to the ravages of this disease, and whether it be on account of its deterioration from successive propagation, or from its inherent constitutional weakness, should no longer enjoy the confidence of the farmer; and secondly, that while this predisposition to the disease was not destroyed, it was strongly resisted by the character of the manure used in cultivation.

DOMESTICATION OF THE BUFFALO.

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Mr. Tucker.—In the Cultivator for July, Mr. Jennison inquires whether any attempts have been made in Missouri, or other parts of the United States, to domesticate the Buffalo, and with what success?

Attempts have been made in Missouri and on the banks of the Arkansas, by several gentlemen, at different times. The success "in domesticating" the animal was complete. But the next and most important question is, are Buffaloes worth domesticating? They have been mixed with our common cattle—the cows have been milked, and the bulls have been made to draw the plow. But neither species was improved by intermixture. The cows give rich milk, but very little of it. The oxen have great strength in their fore parts, but are not to be compared with our common oxen in endurance. Their main strength seems to lie in their heads, necks and shoulders, but they taper off behind in strength as well as form, and soon break down when worked. They are impatient of all vexation, and are rather unmanageable when goaded. Owing to the strength of their horns and fore parts, they break over fences with facility, and in this respect are mischievous. Take them when calves, and they are easily domesticated, and may be seen in different parts of the State, as I have seen them, herding with the common cattle. The hind quarters, ribs, humps and tongues of the cows are esteemed good eating. But few, I imagine, would be willing to exchange forever, beef for Buffalo meat. It is usual, each year, for some of our butchers to fatten a few buffaloes and expose their meat for sale in market at Christmas, when it is sought by some as a rarity. The best pieces, and the hump is the best, sell then for 25 cts. per pound.

The Buffalo is chiefly valuable for his skin, which dressed, sells for from $1.25 to $5, according to quality. He is hunted and killed for the skin alone, in very many instances. The number of buffalo robes brought into this city from the west is about 60,000 per annum. The number has been as high as 100,000 in a single year, but the receipts are diminishing. The animal was formerly very abundant on the banks of the Mississippi, but at present he is not found, in the wild state, within less than 200 miles of our western boundary. Great numbers of the animal are destroyed every year by Indians and hunters, and the species must, before many years, be exterminated. Expeditions are every year fitted out from this city, to hunt the buffalo for amusement. Two young sprigs of the nobility of Scotland, are at this moment in this city for the purpose of embarking in an expedition of this kind. A three months expedition of this sort, fitted out with five voyageurs, a guide and a hunter, with the requisite means of transportation and provision, costs not far from $2,000.

The experiments tried in domesticating the buffalo, have led to the conclusion that the animal is not worth domesticating, unless it be for curiosity.

The Season and Crops.—Our haying and harvesting are over, and we have had excellent crops. My timothy crop this year has equalled about 3 tons to the acre. The crop of fruit of all kinds is a fair one. The early part of the season was as favorable as could be wished. Lately, however, we have been suffering from drought and extreme heat. The thermometer averaged during day time 95 degrees in the shade, for the week before last. The corn and potato crops will be seriously injured by drought unless we soon have rain. During the last few days, we have experienced one of those sudden changes so characteristic of this climate. A cold north wind has been blowing, the thermometer down to 60 degrees, and woolen clothes have been comfortable during the day and blankets by night. An unusual degree of sickness prevails, chiefly intermittent fevers, and disorders of the bowels.

Agricultural products are abundant and extremely low. The quantity exported from this city this year exceeds the amount of any previous year, and is nearly double that of 1845—in many articles more than double. This valley will be able to supply the world. But to get easily to market, we want the Mississippi cleared of snags, and a rail road from this city to Lake Erie.

THO. ALLEN.

Crystal Springs, St. Louis, Mo., July 20, 1846.

AGRICULTURAL EXHIBITIONS.

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N. Y. State Agricultural Society.—Annual exhibition to be held at Auburn, Sept. 16th and 17th.

American Institute, New-York—Horticultural exhibition to open on the 6th of October—Plowing and Spading Matches on the 9th—Cattle-show on the 14th and 15th of October.

Onondaga Co.—Fair to be held at Syracuse, Oct. 1st and 2d.

Allegany Co.—We have received the premium list of this society, and among the prizes offered, we notice thirty vols. of "The Cultivator." The time and place of holding the Fair is not stated.

Fairfield Co. (Ct).—Annual exhibition at Bridgeport, Oct. 14th and 15th.

Columbia Co.—Fair at Hudson, Oct. 6th.

Otsego Co.—Fair to be held at Cooperstown, Oct. 1st and 2d.

Seneca Co.—Annual exhibition to be held at Waterloo, Oct. 22d and 23d.

Monroe Co.—At Rochester, Oct. 15 and 16

Lewis Co.—At Lowville, Sept. 23 and 24.

THE CULTIVATOR.

ALBANY, SEPTEMBER, 1846

TO CORRESPONDENTS.

Communications have been received, since our last, from Perkins & Brown, N. Longworth, L. B. E., C. N. Bement, Stephen Culver, S. S. Randall, W. Bacon, V. W., S. Tillotson, A. J. Moseley, Thos. Allen, J. Shillaber, B. M., G. W. Dobbin, F. A. Wier, Z. C. Robbins, Frock and Trowsers.

Books, Pamphlets, &c., have been received as follows:

Incentives to the Cultivation of the Science of Geology, designed for the use of the young. By S. S. Randall, Dep. Supt. of Common Schools of the state of New-York. Greeley and M'Elrath, New-York, publishers—190 pp. duodecimo. From the Author, and from the publishers.

The Cultivation of American Grape Vines, and Making of Wine. By Alden Spooner, Brooklyn. A. Spooner & Co , publishers. From the Author.

Daily Cayuga Tocsin; from Maj. J. B. Dill.

Speech of Hon. J. A. Seddon, of Va., on the Tariff, delivered in the Ho. of Rep., June 29. From the Author.

Remarks on the Culture of the Grape, &c., in the Western States. By Melser Flagg, M. D., Cincinnati.

Premium List of the Ag. and Hort. Department of the American Institute, for 1846.

Constitution, By-Laws, &c., of the Buffalo Hort. Society.

Reports of the officers of the Maine Insane Hospital. From Dr. James Bates Superintendant.

Speech of the Hon. Truman Smith, of Connecticut, in opposition to the Warehouse-bill, delivered in Ho. of Rep., July, 31, 1846.

MONTHLY NOTICES.

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State Cattle Show.—Those who intend to exhibit stock at the show at Auburn, would do well to notify Ira Hopkins, of that place, as soon as practicable, stating the number and kind of animals to be sent; and on their arrival, Mr. H. will be prepared to inform the persons having charge of them, where the animals may find suitable accommodations.

Those wanting provender will notify Chs. Richardson, of Auburn, stating the kind, quantity, &c., that is wished.

Fruit.—We have received some very fine specimens of the Magnum Bonum plum, from the garden of Prof. Hall; also some good samples of the Julienne pear and Holland plum, from Mr. E. Dorr.

American Institute.—The *nineteenth* Annual Fair of this Association will be opened at Niblo's Garden, in the city of New-York, on the *sixth* day of October next. The Show of cattle and other animals will take place at the corner of Twenty-third st. and Fifth Avenue, on the 14th and 15th days of October; and the Plowing and Spading matches on the 9th of that month. Numerous and liberal premiums are offered in all departments of horticulture and floriculture, and also for the most profitable farms and gardens. The list of premiums for stock, embraces Native, Durham, Hereford, Devon, Ayrshire, and Alderney cattle, besides fat cattle and working oxen; Saxon, Spanish, Long-wooled, and Middle-wooled sheep, and Alpacas; Thorough-bred and other horses; Mules and Jacks; Swine, and Poultry. No entrance money for stock will be required, and feed will be prepared for those who wish to purchase, at the cheapest rate. Entrances of stock must be made in writing at the Committee Room by the 12th of October, or they may be previously sent to T. B.

WAKEMAN, Corresponding Secretary. Animals which have before received the premiums of the Institute, are now, by a change of rule, allowed to compete without special reservation.

STOCKS FOR PEARS.—Mr. B. MACOMBER, of Grand Isle, Vt., gives us his mode of engrafting the pear on apple stocks. He says—"As I am without pear stocks, in cultivating pears I remove the dirt from a small apple tree; one from half an inch to an inch in diameter is about the right size: cut it off below the surface of the ground and insert a pear scion in the usual method of grafting; leaving four or five buds on the scion, from which there will start as many limbs, which after they have arrived at suitable size, (except the main shoot) I bend down as layers and let them take root."

HOUSES OF UNBURNED CLAY.—Will some of our Canada correspondents, or others, give us an article on the best mode of building on this plan? stating all the important details, as far as practicable, and particularly whether the weather in winter or at any other season affects the outside so as to do injury.

CROPS IN ILLINOIS.—J. SHILLABER, Esq., of Dixon, writes under date of July 15th, that the wheat crop is much injured by rust. Corn, barley, oats and potatoes were promising.

COTTON CULTURE.—In regard to the suggestion of our correspondent J. G. C., at St. Joseph, La., we can only say we should be pleased to receive articles on the culture of cotton from those engaged in the business. If anything can be given in addition to the excellent articles furnished by Dr. CLOUD, (see vols. for 1843 and '44,) we should be glad to give it to the public.

Those in want of MERINO SHEEP are referred to the advertisement of Mr. BURRITT, in this number. We presume Mr. B.'s statements in regard to the produce of his flock are entitled to credit. His buck "Major" we saw at the Utica show, and thought him a good animal—large-bodied and well-formed, with clean, white wool, of considerably finer staple than many of the "large shearers" of which we hear.

POTATO ROT.—The latest intelligence from the potato-fields, is, that the rot is not increasing, and that in those cases where the tops were only partially killed by the blight, which, during the early part of August, spread with such rapidity, they seem to be rather recovering from the effects of the attack. We hope, therefore, that the disease for this season has reached its crisis, and that no new cases will occur. We have heard several complaints within a few days, that the *carrot* crop is in some instances affected by a blight in a similar manner to that of potatoes, and that the root itself is not unfrequently found in a decayed condition. How far has this been noticed?

CROPS IN SOUTH CAROLINA—Extract from a letter received from A. G. SUMMER, Esq, dated Columbia, S. C., July 31, '46:—"Our crops look promising this season. Of small grain there has been a most abundant crop, though much of our wheat is injured by rain—having sprouted before it could be cut. I made from three bushels of Harmon's Improved Flint wheat, bought in New-York, *one hundred and three bushels*, and it grew on a fraction less than three acres of land. My oat crop was heavy; and from the two-rowed variety of barley (northern seed,) I made a fine crop. I have however, to record my experience against northern rye seed, as I sowed twenty bushels of it the last eason, and it did not send up a dozen stalks in the whole field."

IMPORTATION OF DURHAM COWS.—The packet ship New-York, Capt. CROPPER, which arrived at New-York city on the 10th July last, brought a Durham cow, called *Hilpa*, for GEO. VAIL, Esq., of Troy. This cow, together with another one, called *Cecilia*, which will soon follow, was purchased in England for Mr. VAIL, by THOMAS BATES, Esq., of Kirkleavington, Yorkshire. The following are the pedigrees of these cows, as certified by Mr. BATES:

Pedigrees of two Short-Horn Durham Cows purchased by Thomas Bates, of Yorkshire, England, for George Vail of Troy, state of New York, of the Messrs. Bells:

Mr. Thomas Bell's cow Hilpa,—roan color, calved May 23d, 1840; got by Cleveland Lad, (3407;) dam, Hawkey, by Red Rose bull, (2493.) Grand dam (Hart) by Rex, (1375;) g. g. dam bred by Mr. Richardson, of Hart, Durham Co., who had the breed above 30 years, and were all roan color, and good milkers.

Mr. Robert Bell's cow Cecilia, red and white; calved Oct. 6, 1841; got by 3d Duke of Northumberland, (3647;) dam by Short tail, (2621;) grand dam (Chapman,) by Skepton Bridge bull, (5208,) and from a tribe of cows all good milkers, and long in the possession of the breeder thereof. The son of the above cow, Hilpa, by Duke of Northumberland, (1940,) when a calf, in 1844, obtained the highest premium of the Yorkshire Co. Ag. So. The same autumn, obtained the highest premium at the Durham Co. Ag. Society, at Stockton, and on the following day he was also awarded the highest premium given by the Cleveland Agricultural Society. Hilpa was bulled before she left England by the prize bull Walton.

The cow HILPA is an animal of fine points. She has the appearance of a good cow for the dairy, and is besides what graziers would call a "nice handler."

☞ Among our advertisements will be found that of Mr. GEO. B. CHASE, for the sale of his farm. The Auburn *Advertiser* says, that considering the quality of the land, the stone quarry, and the numerous facilities afforded by the location, it is one of the most desirable in that region.

SHEEP RANGES.—We would call the attention of those desirous of purchasing tracts of land for the purpose of keeping sheep, to the advertisement of Messrs. WILSON of Virginia. We know nothing of the tract which they offer for sale, except what may be learned from their statement; but it strikes us it would be an object to make thorough inquiries respecting it.

☞ The farm offered for sale by ROGER S. MOORE, (see advertisement in this number) we have no doubt is one of the most desirable to be had in the country—whether considered in relation to its advantages for profitable farming, or for its attractions as a country residence for professional or mercantile gentlemen. For particulars in reference to it, inquire at this office.

TO GROWERS OF BARLEY.—The principal brewers of New-York, Philadelphia, Boston, Baltimore, Washington, Albany, Troy, Poughkeepsie, Newburgh, Hudson, and Providence, have issued a circular, in which they state that they have for many years past suffered very severely on account of the barley having been brought to market in a bad condition, which it is said, is "owing in a great degree to the haste of the farmers, who in many instances have it threshed in the field or barn before it has undergone the sweating operation, which requires it to lay in the straw at least twenty or thirty days after it has been gathered, and which is absolutely necessary to make it a good, wholesome, vegetating grain." They state that they "have also reason to complain of some of the threshing machines now in use, that break a great portion of the grain, thereby rendering it unfit for malting, and which, by coming in contact with the good grain during the process, makes it utterly impossible to produce a good article of malt." For these reasons they have determined not to purchase barley from persons who pursue the above course, and they desire those engaged in the growth of the article, to guard as much as possible against practices that are operating seriously against themselves and the brewers.

SINGULAR.--A correspondent at Shiawassee, Michigan, informs us that he lately found *nine* full grown eggs in a common hen, which was dressed for domestic use. We should think this hen's organ of *philoprogenitiveness* must have been very small, or she would have preferred to "increase and multiply," rather than to hoard up such a stock to no purpose.

SALE OF WOOL.—A letter received from Messrs. PERKINS & BROWN, dated Springfield, Mass., July 28, '46, informs us that they had just sold an entire clip of about 2,300 lbs. of wool for sixty-nine cents per lb., including in each fleece the whole of the worst locks ever shorn from sheep. "This, it is said, "was the average, absolutely, in cash;" and it is added that "the grower was to receive one cent per pound more, provided the new tariff-bill should not pass." This flock, it is said, averaged, old and young, a little over $1.60 per head. It will be recollected that Messrs. P. & B. have a wool depot at Springfield, where wool is sorted and sold for the various kinds of manufactures.

CONNECTION OF SCIENCE WITH AGRICULTURE.—We learn that at a late meeting of the Corporation of Yale College, two new professorships were established. One is that of Agriculture and Animal and Vegetable Physiology, founded on a donation of $5,000 from JOHN T. NORTON, Esq., of Farmington, Ct., to promote the study of Agricultural Chemistry. The son of the donor, Mr. JOHN PITKIN NORTON, whose valuable communicatons to our pages for the last two years will be recollected by our readers, has been appointed to the professorship. The other new professorship is that of Practical Chemistry, or Chemistry as applied to the Arts, to which Mr. B. SILLIMAN, Jr., has been appointed.

SALE OF DURHAM CATTLE.—A herd of Durham cattle, belonging to GEORGE RENICK, Esq., of Chillicothe, Ohio, were sold at public auction on the 29th of July, last, and as we learn from the *Ohio Cultivator*, brought the following prices.:

Cows.	
Donna Maria,	$95
Lady Paley,	87
Poppy,	82
Red Rose,	111
Rose of Sharon,	97
Evening Star,	120
Virginia,	110
Scioto,	110
Maria,	52
Thames,	120
Miss Marshall,	125
Sandusky,	60
Dutchess,	81
Paint,	73
Laura,	43
Lilly,	45
Flora,	125
Daisy,	40
Blossom,	54
Scippo,	90
Blanch,	100
Blink,	90

HEIFERS THREE Y'RS OLD.	
Bloom,	$45
Josephine,	71
Lucy,	80
Twin,	52
Mate,	35
Lady,	80
Dairy,	55
Venus,	53
Beauty,	75

Ten yearling heifers sold for the following prices:—$36, 41, 31, 30, 32, 50, 36, 30, 31, 43.

BULLS.	
Prince Charles, 3 years old,	105
Albion, do.,	60
Farmer, 2 years old,	30
Red Rover, 1 year old,	46

Five bull calves sold for $36, 54, 59, 54, 30.

These cattle were all bred from those imported by the Ohio company in 1834, '35, and '36, and were, it is said, of highly approved pedigree. A few years since, it was one the finest herds within our knowledge.

FOREIGN.

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By the Caledonia arrived at Boston on the 18th, we have foreign papers to the 4th of August. The crops in Britain as well as on the continent, are generally good. The wheat in some districts of England had been cut. The quality is said to be fine, but the large quantities in market and constantly arriving from foreign ports, keep prices very much depressed. The rot in potatoes had shown itself in some parts of Ireland and also in Scotland, but the crop is spoken of as being in most cases promising. In France and Belgium, is said to be very fine. American beef was selling in considerable quantities, but at low rates. Pork was dull, and on the decline. Cheese had arrived from the United States in considerable quantities, but owing to the inferior quality of the article, was dull of sale. A large sale might, it is said, be counted on for prime qualities.

The annual exhibition of the Royal Agricultural Society took place at New-Castle-on-Tyne, in July. The number of exhibitors is stated to have been greater than at any previous meeting. The show of horses is spoken of as very superior. Short horned cattle were numerous and good, and the Herfords and Devons, though in less numbers, owing to the exhibition being remote from the breeding districts of those breeds, were of excellent quality. Leicester and South-Down sheep were numerous and sustained their reputation as to quality. The exhibition of pigs was very superior. The show of implements was very extensive, and the articles themselves generally evinced great improvement. Valuable lectures were delivered before the society by Professor JOHNSTON and others, which we shall notice more fully hereafter. Thirty thousand persons entered the show-yard in one day during the exhibition.

INQUIRIES.

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DECAY OF HEMLOCK SLEEPERS.—H., (Middlebury, Vt.). You say the decay of your sleepers is "caused by a damp cellar and allowing the bark to remain thereon for years after the house was built." Our experience does not furnish a knowledge of any effectual remedy in such a case. We should think as thorough ventilation and drying as is consistent with all circumstances, would be most likely to check the decay of the timber.

CHEESE MAKING.—V. W., (Minisink, N. Y.) For making Cheshire cheese, see an article in this number. For Gloucester cheese, see Cultivator for 1844, p. 165, 166. For the mode practiced at some excellent daries in Connecticut, see last vol. p. 283, '84.

SOILING.—W. F. B., (Davidsonville, Md.) For the present we must refer you to our volume for 1846, p. 22, 23. We may take up the subject more fully at another time. You will, however, find Mr. Newhall's system as there given a good one.

HESSIAN FLY.—J. S., (Tyre, N. Y.) We will not say that this insect was brought here by Hessian troops in the time of our revolutionary war, but we have never heard of its having been discovered here previous to that time. Dr. HARRIS, also, states this. [*Insects injurious to Vegetation, p.* 422, 423.] He says it was first discovered on Staten Island, in 1776, in the neighborhood of Sir Wm. Howe's debarkation, and at Flat Bush on the west end of the island.

CANADA THISTLE.—J. S. There is a tradition that the seeds of this plant were brought from France, and sown in Canada by the first settlers, for the purpose of affording food by its roots, for hogs.

CONDENSED CORRESPONDENCE.

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DEEP PLOWING.

A subscriber at New-Brunswick, N. J., relates several instances in which deep plowing did not prove beneficial. In the case first related, he undertook to raise a large crop of turneps on a small piece of ground. The soil, which was a sandy loam, very friable and clear of stones, he dug with a spade, twelve inches deep, mixing well with the soil a very large quantity of well-rotted manure from the horse and cow stable. The crop was well taken care of, but the produce was small compared with other crops of the same kind in the neighborhood. There was, however, an extraordinary growth of tops, they having reached the height of two feet.

He next tried a similar experiment with potatoes—plowed deep, put in plenty of rotten manure, and mixed it well with the soil. The same result followed as with the turneps, very large tops and small potatoes, and of a poorer quality than the seed planted.

These results are by no means singular—we have often known such, especially with the kind of soil he mentions. A large quantity of animal manure deposited in a raw soil, nearly destitute of organic matter, usually tends, so far as our own observation goes, to produce straw or haulm in a greater proportion than grain or tubers. But after a year or two, when the manure has become thoroughly decomposed and incorporated with the soil,—when the soil itself has really become rich to the depth it has been worked—this deficiency of grain and tubers and excess of straw and tops will not follow.

The same writer mentions some trials he had made with urine, which resulted unfavorably. He says it "scorched up" every thing to which it was applied, and that he finds it "acts so in pastures where horses run and have voided their urine." We presume that the cause of the "scorching" is the same in both cases, that is, too much is applied in a place—bringing in contact with the plants a greater quantity of ammonical salts than they can digest. If he will first apply the urine to peat, charcoal dust, saw-dust, or any other absorbing substance, and then mix it with the soil, or use it as a thin top-dressing, he will find no cause of complaint.

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COCKROACHES KILLED BY CATS.

A correspondent at Hartford Connecticut, with the signature L. B., informs us that his cats devour cockroaches, and he thinks it probable that cats in general do the same, as he has never known those insects to be found in great numbers in houses where catswere kept. His attention was first called to this matter from his cats having vomited cockroaches.

We doubt much whether the destructionof these disgusting insects is effected to any considerable extent by cats. That kittens, or young, *inexperienced* cats, sometimes eat cockroaches, we have noticed; and we have generally observed, that they produce the same effect exhibited by L. B.'s cats—that is, the insects made them sick, and they vomited up their unnatural meat. But we have seldom known old cats touch cockroaches; on the contrary, we have, in one instance, at least, been annoyed by the insects when several cats that were about the house totally disregarded them.

NEW PUBLICATIONS.

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INCENTIVES TO THE CULTIVATION OF THE SCIENCE OF GEOLOGY; by S. S. RANDALL, Deputy Superintendent of Common Schools for the State of New-York, Editor of the Common School Journal, &c. This is a work of 190 pages, designed chiefly as an incentive to the study of Geology, and is dedicated to the young of both sexes, of the State of New-York. From what we have examined, we think it most admirably calculated for its purpose. It is written in a clear and interesting style; technical terms, which are often so discouraging to beginners, being purposely avoided, and the vast subject to which it relates, is treated generally in a manner which cannot fail to be both attractive and instructive. Published by GREELY & MCELRATH, Tribune Buildings, New-York.

THE CULTIVATION OF AMERICAN GRAPE-VINES, AND MAKING OF WINE; by ALDEN SPOONER.—A neat and useful manual of about 100 pages, the author of which is understood to have had considerable practical experience in the culture of the vine, &c. It furnishes a brief history of the vine, a notice of foreign varieties in America, and a history of American vines, particularly the celebrated Isabella, Catawba and other fine varieties. It gives also plain directions for the culture and general management of the vine, for protection against insects, diseases, and for making various kinds of wine. Published by A. SPOONER & Co., 57 Fulton st., Brooklyn, N. Y.

MEDICO-CHIRURGICAL REVIEW.—We have before us the number of this excellent publication for July. This work is undoubtedly the ablest and most valuable periodical of its kind in the world. It is a quarterly, each number of which contains near 300 pages, closely printed original matter. The American edition is issued by R. & G. S. WOOD, 261 Pearl street, New-York, at $5 per annum in advance. We should suppose that the pleasure to be derived from its perusal, to say nothing of its undoubted utility, would be worth twice the price of subscription, to any practising physician, or to any other person interested in a knowledge of the human system, or animal physiology in general.

NEW-YORK FARMER AND MECHANIC.—This is a weekly publication devoted to the dissemination of intelligence relating to agriculture, the mechanic arts, &c. It is under the editorial management of W. H. STARR, [illegible] M. BAKER and E. P. WHITMORE,—the first named gentleman being the publisher. Few papers in the country are calculated to be productive of more real good than this. It has been issued for nearly two years, and during that time has circulated a large amount of valuable matter. It has lately undergone several improvements in typographical appearance, and not only for its *good looks*, but for its sterling worth is highly deserving encouragement. $2 a year in advance.

REPORTS OF THE OFFICERS OF THE MAINE INSANE HOSPITAL.—We are indebted to Dr. JAMES BATES, the superintendent of this institution, for a copy of the report in reference to its concerns for the year 1845. We are pleased to learn that the hospital is managed in a manner productive of very gratifying results to its philanthropic founders and friends.

PLANTING STRAWBERRIES.

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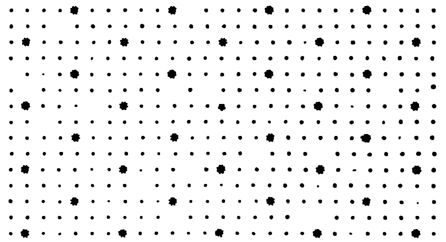
MR. EDITOR.—I am about forming a "strawberry patch," on a scale somewhat extensive; and, to avoid disappointment, I should like to be directed in your September number, as to the manner in which the pistillate and staminate vines should be planted, so as to yield fruit in the greatest abundance.

Respectfully yours, RURALIST.

To secure productiveness in pistillate varieties, in the highest degree, it is usually considered advisable to intermix about one-tenth of staminate plants. These may be differently disposed, according to the mode of cultivation. If the plants are placed in beds, at equal distances each way, as is usually practised in gardens, the staminate plants may be distributed as exhibited in the annexed figure, where the dots represent the bearing or pistillate plants, and the stars the staminate plants. According to this mode, there is one staminate plant to eleven bearing ones; and being distributed very nearly in the true hexagonal form, each staminate plant is nearer to a greater number of bearing ones, than by any other mode of arrangement.



Where they are cultivated in rows, on a large scale, to admit the working of a horse among them, every tenth row may be staminate.

It is not necessary that a *barren* staminate variety be used to impregnate the others. There are some fine sorts, which possess both stamens and pistils in abundance, which will not only fertilize themselves, but all others round them. Perhaps the best for this purpose is the large early Scarlet, a very early and productive variety, the fruit usually seven-eights of an inch in diameter, and of very fine flavor.

DOMESTIC ECONOMY.

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OYSTERS OF GREEN CORN.

A lady of whose skill in housewifery we have seen good evidence, has kindly furnished us the following directions for preparing a dish, which, she assures us, very much resembles fried oysters, in taste.

"Grate 12 ears of sweet corn; take one-half a pint of milk to rinse out the cobs; add six eggs, three tablespoonfuls of flour; and salt to the taste. Fry them on a buttered griddle, like pancakes. They should be fried slowly, and be thoroughly cooked."

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SUCCOTASH—[not "suckatash," brother BEECHER,] is a dish, which, as well as the name, according to NOAH WEBSTER, "was borrowed from the native Indians." What innovations on the primitive mode of preparing it have been made, in its transfer from savage to civilized society, we are unable to say. The *vegetable* material, (corn and beans,) of which the dish is composed, were no doubt first obtained of our red brethren; but for the *animal* portion, we substitute the flesh and fat of the hog, for that of the bear, 'coon, and 'possom, which they used. Mr. BEECHER, of the Indiana *Farmer and Gardener,* gives the following mode of making succotash; and from what we have heard of his correct *taste,* (in more than one thing,) we have no doubt the recipe is A, No. 1. The directions are said to be "for a mess sufficient for a family of six or seven."

To about half a pound of salt pork add three quarts of cold water, and set it to boil. Now cut off three quarts of green corn from the cobs, set the corn aside, and put the cobs to boil with the pork, as they will add much to the richness of the mixture. When the pork has boiled, say half an hour, remove the cobs and put in one quart of freshly-gathered, green, shelled, beans; boil again for fifteen minutes; then add the three quarts of corn, and let it boil another fifteen minutes. Now turn the whole out into a dish, add five or six large spoonfuls of butter, season it with pepper to your taste, and with salt also, if the salt of the pork has not proved sufficient. If the liquor has boiled away, it will be necessary to add a little more to it before taking it away from the fire, as this is an essential part of the affair.

TOMATO PICKLES.—Take Tomatoes two-thirds ripe, (when they begin to turn a little red,) prick them with a fork, put them in a strong brine, and let them remain eight days; then put them in weak vinegar to remain 24 hours; remove them from this, put them in stone jars; and to a peck of Tomatoes add a bottle of mustard, an ounce of cloves, and an ounce of black pepper ground, laying alternately a layer of tomatoes and spices. Then pour on strong vinegar cold and they will be found to be delicious. The brine should be prepared by boiling and putting in as much salt as will dissolve, then suffered to cool. For any kind of pickles it is best when prepared in this way.

ANOTHER.—Take the small round tomatoes, let them lay in weak vinegar two or three days; then prepare the best of vinegar by putting in cloves, allspice, pepper, cinnamon, and such spices as one may fancy, and then scalding it well. When entirely cold, put in the tomatoes, and if there is sufficient body to the vinegar, your pickles will never require any farther trouble, provided they are kept from the air. An ounce of alum to a gallon of vinegar is a great improvement to *cucumber* pickles, but the writer has never tried it for tomatoes.

GREEN TOMATO PICKLES, or *tomato soy.*—Slice green tomatoes, crosswise, put them in a stone jar, in layers, giving a liberal sprinkling of salt to each layer, till the jar is full. Let them stand over night; then squeeze all the water from them that can be done by pressing them with the hands. Then commence putting them in jars by laying the tomatoes two inches thick, and sprinkling on the layer of ground allspice, cloves, mustard-seed, pepper, horse-radish, stick cinnamon and onions, if they are liked. When the pot is full, pour on the best of cider vinegar, put on a slight weight, and cover it tight. The writer has used this recipe a number of years and never had occasion to pour off the vinegar and scald it, but this should be done if there is the least appearance of fermentation.

MR. EDITOR.—The following recipe for making an excellent syrup, I lately received from the lady of WM. BUEL, Esq., Rochester. A small quantity of this syrup, mixed with cold water, makes the most pleasant and grateful beverage for hot weather I ever tasted.

W. H. S.

"Cover the raspberries with good vinegar and let them stand for twenty-four hours; then strain the juice, (after having crushed the fruit,) and put one pound of white sugar to one pint of the strained juice; boil down and skim, and then bottle for use."

PRICES OF AGRICULTURAL PRODUCTS.

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New-York, Aug. 21, 1846.

COTTON—New Orleans and Alabama per lb., 7¾a9¾c.—Florida. 7¾a9¼—Upland, 7¼a9 cts.

BUTTER—Prime, per lb., 15a16c.—Common, 6a7.

CHEESE—Per lb., 6a7c.

FLOUR—Genesee, per bbl, $3.94a$4.00—Michigan, and Ohio, $3.81.

GRAIN—Wheat per bushel, 81a85 c.—Rye, 68 c.—Corn—Western, 51a52c—Barley, 48.—Oats, 29a30

HEMP—Russia, clean. per ton, $215a$225—American water-rotted. $131a$135.

HAMS—Smoked, per lb., 5½a7 cts.

BEEF—Mess, per bbl., $6.50a$7—Prime, $4.50a$5.

LARD—Per lb. 6a7c.

PORK—Mess Ohio, per bbl., $9.62a$9.75—prime, $8a8.12½.

WOOL—(Boston prices.) Aug. 18:

Prime or Saxon fleeces, washed per lb.…….	32a34	cts.
American full blood fleeces,…………………	27a28	"
" three-fourths blood fleeces,………	22a28	"
" half blood do ………	20a22	"
" one-fourth blood and common,…..	18a20	"

FRUIT TREES.

THE subscribers would respectfully call the attention of the public to their assortment of FRUIT TREES. They are enabled this fall to offer a choice collection of many of the most esteemed varieties of Apples, Pears, Cherries, Peaches, Plums, &c., &c., &c. The assortment of trees having been considerably increased, persons desirous of obtaining articles in the nursery line, will find it worth while to examine the collection previous to purchasing elsewhere. All of which will be offered at very reasonable prices for cash.

N. B. All articles intended for distant transportation will be carefully packed at the expense of the purchaser, and delivered free of cartage to any part of the city.

WILSON, THORBURN & TELLER.

☞ Orders sent to Wm. Thorburn, Seedsman and Florist, 49 Broadway, Albany, will receive prompt attention.

Sept. 1—3t.

COMMERCIAL GARDEN AND NURSERY, OF PARSONS & Co., FLUSHING, NEAR N, Y.

THE proprietors of this establishment are constantly increasing their stock which now covers nearly seventy acres of ground, and includes every desirable variety of Fruit and Ornamental trees, Shrubs, Roses, Vines, &c Their possession of specimen grounds for the testing of every variety of fruit they cultivate, affords them increased facilities for the attainment of correctness. They would also call attention to their large assortment of Foreign Grapes, some seventy varieties of which they are fruiting under glass.

To venders and those who purchase in large quantities, liberal discounts will be made Catalogues can be obtained gratis of Parsons & Lawrence, 10 Pine st; of A. B. Allen, 187 Water st., or of the proprietors by mail.

Sept 1.—3t. [1]

BUFFALO NURSERY AND HORTICULTURAL GARDEN, BUFFALO, N. Y.

THIS old establishment now contains the largest stock of Fruit trees, Ornamental trees and Shrubbery, of size for sale, ever offered in western New-York, or in the western country. The stock of fine thrifty apple trees is now unusually large and fine. Trees from 6 to 8 feet high $18 per 100. Trees from 5 to 6 feet, (5 to 20 of a sort) $12 to $14 per 100. The assortment of choice and select Cherry trees is also very large, embracing a large number of the most valuable, and noted sorts. Trees 5 to 6 feet high, 37½ cts each; 6 to 8 feet, 50 cts—from $32 to $35 per 100

Also a very general assortment of the Pear, Peach, Plum, Quince, Apricot, Gooseberry, Currant, Raspberry, Strawberry, &c.

The assortment of Ornamental Trees and Shrubs, Herbaceous plants, &c., is now much larger than ever before, including a fine collection of Evergreen trees and Shrubs.

About 200 varieties of the Rose, many of them rare and truly fine. 16 varieties of the Pæonie, 60 varieties of splendid Dahlias, together with a large stock of choice green-house plants.

Extensive additions are constantly being made to this establishment, and no expense has or will be spared, to render it as perfect as that of any other in our country. Specimen or standard trees of each variety of fruit here propagated, may be found growing on his grounds; and all of the new sorts of fruits as they are brought out, are engrafted in the tops of bearing trees. Perhaps few establishments in our country can show as many specimen trees in fruit as may be found here. Nurserymen and others are respectfully invited to visit this establishment, and examine the fruits and the general arrangement of the nursery grounds.

Trees and plants packed in superior order, and forwarded with despatch. Descriptive Catalogues forwarded to all post paid applications.

All packages destined for the west will be forwarded by steam unless otherwise ordered. Orders by mail or otherwise will receive the most prompt attention.

BENJ. HODGE

Buffalo, Sept. 1st, 1946 1t [1.]

GUANO,

BY the ton or hundred, or in smaller quantities, at 23 Dean-st.

E. COMSTOCK & Co., Albany Ag. Warehouse

NOTICE.

THE subscriber is happy to be enabled to give this notice to the public at this period, that the improvements added to the *genuine* "Warren Two Horse Power Machine," as promised in the last January number of the Cultivator, (see advertisement) and as again spoken of in the June number, have proved by fair experience to be all that was hoped or needed. The machine bears the warrant of giving entire satisfaction in all respects.

The subscriber is also successfully furnishing the "Trimble Two Horse Power Machine,"—price $60. J. PLANT,

Sept 1—1t. 5 Burling-Slip.

FOR SALE.

A FEW fine Paular Merino sheep for sale, bucks and ewes; say about 50 ewes from four to six years old, and 40 to 50 buck lambs, that are nice, and of a large size, and 6 or 8 bucks that are from one to four years old, all in fine order.

JOSEPH I. BAILEY.

Newport, Sept. 1, 1846.—3t.

MERINO SHEEP.

THE subscriber has for sale a fine lot of BUCK LAMBS from his flock of Paular sheep, which were selected by himself, with great care, from some of the best flocks in Vermont. These lambs were dropped early, and will therefore be able to do good service this fall. Should a few ewes be wanted with a buck, for the purpose of commencing a flock, they would be spared. A portion of the lambs were got by the buck *Major*, which after having taken one of the premiums at the State Fair at Utica, took the first premium at the Tompkins county Fair, in October last. He was shorn for the first time, on the 4th of June last, having carried his fleece two seasons, and after having been thoroughly washed, and allowed proper time to dry, he gave *fifteen* pounds of good, handsome wool. The whole flock, 85 in number, about 60 of which are ewes, averaged 5 lbs. of wool per head, well cleaned and in good order. Some of the ewes with lambs by their sides, gave over 6 lbs of wool each. The proportion of lambs reared for the two last seasons, is within two per cent. of the number dropped. REED BURRITT.

Burdett, Tompkins county, N. Y., Sept. 1—1t.

TO WOOL-GROWERS.

THE subscribers have a tract of land lying in Patrick Co., Va., consisting of about *ten thousand acres*, which they wish to sell or rent. It has on it immense quantities of the largest timber, with abundance of water, and water power. A portion of the land has been cleared, and produces the finest grass in the world. We would like to dispose of it, or to enter into partnership with any gentleman who would furnish a flock of sheep, and go into the business of growing wool. Apply by letter to either of the subscribers, at Cumberland Court House, Va., or in person to Col. A. Staples, Patrick Co., Va., who will show the land.

WILLIAM W. WILSON
Sept. 1—6t. WILLIS WILSON.

DURHAM BULL "CATO" FOR SALE.

THE subscriber who is now raising 20 head of his stock, having no further sufficient use for him, offers for sale his thorough bred improved Short-Horn bull "Cato."

He was four years old the 3d of May last,—vigorous, and very sure—extremely tractable, and of kind disposition,—of good size, —color milk white.

His sire was the celebrated imported bull "Fairfax,"—his dam, the full bred cow "Diana," renowned for extraordinary milking properties, both owned by E. P Prentice, Esq., of Mount Hope.

The frontispiece of the Jan. number of the "Cultivator" of 1843, is an engraving of his sire, of whom Cato is now almost an exact counterpart in beauty, symmetry, and color; and the same volume contains a full description of his pedigree, from the third volume of the British Herd Book, page 509. He received the first premium at the State Fair, when a calf of six months, over a large competition.

If not previously sold, he will be offered for sale at Auburn, at the annual Fair of the N. Y. State Agricultural Society, in September.

Letters concerning him may be addressed to the subscriber at Saratoga Springs, Saratoga Co., N. Y., where the bull can be seen. H. H. LAWRENCE

Sept. 1, 1846.—1t.

AUCTION.

THE undersigned, assignees of Gen. William Salisbury, will sell at public auction, on Tuesday, the 15th of Sept., next, at 10 o'clock A. M., at the public house kept by Mr. Smith, in the village of Madison, county of Greene, the real estate situate near Madison, late the property of the said Gen. Wm. Salisbury, containing about 900 acres, divided into farms and wood lots. A large portion of the Farms consisting of alluvial flats, on Catskill creek, of the richest description. The property will be sold in parcels to suit purchasers.

Terms—20 per cent. cash, on day of sale, and balance secured by bond and Mortgage, on execution of deed. Title indisputable.

☞ The property in Catskill belonging to the same estate, consisting of a lot with the Brewery on it, will be sold the next day, at 10 o'clock A. M., at the public house of Mr. Osborn, in Catskill. Terms made known on the day of sale.

JOHN VAN DEUSEN,
JOHN VAN VECHTEN,
[illegible] Assignees.

AGRICULTURAL MACHINES.

THE subscriber offers for sale at low prices, wholesale and retail, a general assortment of approved Agricultural Machinery, &c., among which are the following, viz:

Ploughs, No. 10½, 11½, 12½, and other kinds,—prices,	$1 50 to	$5
Cultivators,	4.00 to	6
Harrows,	6.00 to	9
Subsoil Plows,	5.00 to	6
Hay Cutting Boxes,	3.00 to	4
Hand Corn Shellers,	8.00 to	10
Corn and Cob Crushers,	26.00 to	36
Burr Stone Mills,	35.00 to	125
Horse Powers,	40 00 to	60
Threshers,	25.00 to	35
Hand Threshing Machines,	35.00	

Store Trucks, Straw Cutters, Fan Mills, Plow Castings, Gin Gear, Mill Spindles, &c., &c. J. PLANT.

Sept. 1—1t. 5 Burling-slip. N. Y.

LINNÆAN BOTANIC GARDEN AND NURSERY,

Late of William Prince, deceased, Flushing, L. I., near New-York.

THE new proprietors of this ancient and celebrated nursery, known as *Prince's*, and exclusively designated by the above title for nearly fifty years, offer for sale a more extensive variety of fruit and ornamental trees, shrubs, vines plants, &c., than can be found in any other nursery in the United States, and the *genuineness* of which may be depended upon; and they will unremittingly endeavor to merit the confidence and patronage of the public, by integrity and liberality in dealing, and moderation in charges.

Descriptive Catalogues, with directions for planting and culture furnished gratis to those desirous of purchasing, on application, *post-paid*. WINTER & Co., Proprietors.

Aug. 1, 1846...2t*

WIRE CLOTH SEIVE AND SCREEN MANUFACTORY.

THE subscriber has constantly on hand a large assortment of the above articles, which he offers at the lowest market prices. D. L. CLAWSON.

July, 1846—10 mos. 191 Water-st., New-York.

P S.—All kinds of wire work manufactured to order.

KENDALL'S CYLINDER CHURNS.

THE following in relation to the above churns, from a firm in Vermont, who purchase of us, will show in what estimation the cylinder churns are held.

"We wrote you a few days since, to forward three each of the two smallest size churns. Please send us immediately six each of three sizes. Churns are getting in good demand. Our people think there is quite a saving when they can fetch the butter in two minutes, instead of churning two hours with the old fashioned churn. The Kendall churn is getting to be all the go."

The above churns are always for sale at wholesale or retail, at the Albany Agricultural Warehouse, No. 10 Maiden Lane, and 23 Dean-st. E. COMSTOCK & Co.

Aug. 1, 1846.

DOWNING'S NEW WORK.

THE HORTICULTURIST,

AND

JOURNAL OF RURAL ART AND RURAL TASTE.

THIS work, the publication of which was commenced on the first of July, 1846, may be ordered of the Proprietor, LUTHER TUCKER, Cultivator Office, *Albany*, N. Y., or of JOSEPH BRECK & Co., Agricultural Warehouse, 51 North Market-street, *Boston*; M. H. NEWMAN & Co., Booksellers, 199 Broadway, *New-York*; and G. B. ZIEBER & Co. *Philadelphia*, by whom it is published in those cities.

☞ Agents can obtain the work of either of the above publishers, at 20 per cent. discount, where five or more copies are ordered.

THE HORTICULTURIST is edited by A. J. DOWNING, Esq., and published on the first of every month, each number containing 48 pages octavo, printed in the best style, and embellished with plates and numerous other engravings, in a style similar to those given in Mr. Downing's "Landscape Gardening," and "Cottage Residences." Price $3 per annum, payable in advance.

THE HORTICULTURIST is devoted,

1. *To* GARDENING *in a thoroughly practical as well as scientific sense.*
2. *To the* DESCRIPTION *and* CULTIVATION *of Fruit Trees.*
3. *To Gardening as an* ART OF TASTE, *embracing essays, hints and designs on Ornamental and Landscape Gardening.*
4. *To* RURAL ARCHITECTURE, *including Designs for Rural Cottages and Villas, Farm Houses, Gates, Lodges, Hot Houses, Vineries, &c., &c.*

In short, this periodical may be considered a continuation of the various works on Rural Subjects, by its Editor, which have already been so favorably received by the public. It is now his object to assist, as far as possible, in giving additional impulse to the progress of Horticulture and the tasteful in Rural Life; subjects which are now so largely occupying all those interested in country pursuits.

☞ Subscriptions received by the publishers, as named above, and by the Agents for "The Cultivator," throughout the Union

VALUABLE FARM AND COUNTRY SEAT FOR SALE.

THE subscriber offers for sale the Farm on which he now resides, situate in Southwick, Hampden county, Mass. The road from Hartford to Northampton, via Westfield, along which a mail coach passes daily, runs nearly through the centre of the Farm, which contains about 400 acres, nearly half of which is wood land, heavily timbered. It is bounded on one side by the Farmington canal, which renders the communication with New-Haven, an excellent wood market, easy and expeditious. The buildings are a mansion house, with a wing, the latter new, making a front of 70 feet. Also a house for a tenant; three large barns, nearly new, covered with pine and painted; a corn house, carriage house, sheds, &c. Great pains have been taken in selecting and cultivating choice fruit, and there is now on the Farm, in full bearing, a great abundance of the best varieties of apples, cherries, peaches, &c. A part of the land is of superior quality, and on almost every lot is living water.

Tariffville, a large manufacturing village, seven miles distant, affords a ready market for wood and every kind of produce, raised on a farm. This is one of the most valuable and desirable locations in the country, not only for farming purposes, but for the gentleman of leisure. A large portion of the purchase money, if desired, can remain for a term of years. I will sell the whole together, or in two parts. Letters of inquiry addressed to me, will receive prompt attention, or inquiry can be made of LUTHER TUCKER, Albany, or of R. SHURTLEFF, Springfield.

ROGER S. MOORE.

Southwick, March 1, 1846.—6t

VALUABLE FARM ON STATEN ISLAND FOR SALE.

THE well known farm of the late Samuel Akerly, M. D., situated on the South side of Staten Island, in the town of Southfield, Richmond county, in consequence of the decease of its late owner, is now for sale. It contains 125 acres, 25 of which are woodlandl; is in a high state of cultivation, and well stocked with a variety of fruit trees. The house has been recently enlarged—is ample and commodious; the barns are new, and the farm is in good fence. It has a wide front to the water on a bay which abounds with the best kind of salt water fish, also with clams and oysters, all easily procured fresh from their native element. The experience of a long course of years, for the main part of the dwelling house has stood for more than a century, has demonstrated that the situation is perfectly healthful.

The late owner, Dr. Akerly, died in July last; he had cultivated the farm for a number of years with great assiduity and care, keeping a daily and most minute register of the precise amount of labor and cultivation bestowed on each field, and noting many important observations which would be highly instructive and useful to the future owner. The purchaser may be furnished with a copy of this diary.

The site of this farm is extremely beautiful—the approach to it from the main road is a private road of about half a mile in length, running mostly through a piece of woodland, consisting of young timber of vigorous growth. After the visitor has travelled on this road about one-third of a mile, there opens upon him a prospect which takes in the low land, comprising the cultivated part of the farm—the placid and bright bay which separates Staten Island from Monmouth county, N. J.,—the highlands of Neversink, with the two lighthouses erected thereon—the lighthouses on and near Sandy Hook, together with the one at Prince's Bay, including the west end of Long Island. All the vessels employed in the commerce of New-York with foreign countries may be seen as they come in and depart, from the dwelling house and several other points on the farm.

The late owner, Dr. Akerly, who was born and educated in this city, after extensive examination and inquiry for a farm to which he might retire, on account of impaired health, selected this spot, to which he removed in the year 1839. Here he sought health and quiet retirement, and found them, until the day before his decease. He became exceedingly attached to the farm as a residence, and would have most reluctantly exchanged it for any other residence whatever. Such were its attractions that he never left it a single day, in winter or summer, but with regret.

For further particulars apply to HIRAM KETCHUM, Executor, No. 31 Wall st., or SAMUEL BOWNE, No. 83 John-street

July 1, 1846—3t.

POTATOES.

TO those who desire choice varieties of potatoes for seed, a favorable opportunity is offered this fall, as we shall be prepared to furnish the following varieties during the season and until too cold for sending abroad, viz:

"Hall's Early June," decidedly the best early potato cultivated, being not only superior for the table, but good yielders and are fit for eating many days before any other kind. The "Carter Potato" for winter and spring, stands deservedly high, and produces better crops than the Pinkeye. The "Prolific Blue" is an abundant yielder, and where potatoes are grown for feeding stock are a valuable variety. All the above sorts will be carefully packed in barrels and shipped to order.

E. COMSTOCK & Co.
Aug 1. Albany Ag. Warehouse.

WOOL.

LIBERAL advances will be made by the subscriber upon wool consigned for sale, or shipment to England.

HAMILTON GAY,
July 1—3t 83 South-street, New-York.

PRINCE'S PREMIUM STRAWBERRIES.

William R. Prince & Co., Flushing.

HAVING devoted great attention to this Fruit, now offer the most estimable collection existing in America or Europe, embracing all the choicest varieties recommended by the London Horticultural Society, and the most estimable of other countries, including several splendid seedlings, originated by themselves and others. The sexuality of every variety has been investigated, and such plants and directions will be furnished as will insure abundant crops. There is no such thing as strawberries becoming barren when properly managed; they can be transplanted from August to November.

Primordian, the finest and most productive early crimson variety, large, profuse bearer, one of our seedlings, and now first offered, $3 per dozen.

Large Early Scarlet, $1 per 100.

Garnestone Scarlet, $1 for 25, and $2 per 100.

Crimson Pine, large, fine, and prolific, another of our new seedlings, $2 per doz. and $3 for 25

Crimson Cone, one of the most splendid, large, bright crimson high flavor, profuse bearer, unrivalled, $3 for 50, and $5 per 100

Prince Albert, (true sort,) Coul Late Scarlet, Iowa, and Willay, $1 per dozen, and $2 per 50.

Alice Maude, Deptford Pine, Corse's Seedling, Boston Pine, and Buist's Prize, $1 50 per dozen.

President and Clara Victoria, $3 for six.

Swainstone, Black Roseberry, and Victoria, $1 for 25, and $2 per 100.

British Queen, Myatt's Eliza, Myatt's Pine, Elton, and Old Pine, all fine flavor, but poor bearers, $1 for 25, and $2 to $3 per 100.

Hovey's Seedling, Bishop's Orange, Ross Phœnix or Keen's Seedling, and Roseberry, 50 cents for 25, and $1.50 per 100.

Dundee, Hudson's Bay, and Methven, $1 per 100.

Royal Scarlet, Old Scarlet, Melon, and Downton, moderate bearers, 50 cts. for 25, and $1 per 100.

Hudson, (of Cincinnati,) great bearer, $1 for 25, and 2.50 per 100.

Prolific, Large Flat, and Green Hautbois, $1 for 25, and $2 per 100.

White and Red Running Alpine Everbearing, $1 for 50, and White and Red Bush, do., $1 for 25.

Common English Red Wood, (erroneously called Stoddard's Washington Alpine,) $1 per 100.

English White wood, $1 per 100.

Very large quantities at a reduction. Orders not less than $5, (cash enclosed,) will meet prompt attention.

N. B.—All orders must be sent direct to us, and no plants are from us unless our printed bill and signature accompany them.

Flushing, Aug. 1, 1846—2t.

FRUIT TREES, ORNAMENTAL TREES, SHRUBS, PLANTS, &c.

THE subscribers have in progress arrangements for furnishing hereafter every description of Fruit and Ornamental Trees &c., which, when completed, will enable them to forward to their customers in all parts of the country, every variety of choice Fruit Trees, Forest, and Ornamental Trees, Shrubs, Plants &c., from the best nurseries in this country. They solicit orders from their friends and all in want of the above articles. Our central location and acquaintance with most of the nurserymen will enable us to meet the wants of all. When our arrangements are fully made, further and more particular notice will be given. In the mean time we shall be happy to receive orders from those in want of trees for setting out the ensuing autumn. Strawberry plants from one to four dollars per hundred.

E. COMSTOCK & Co.
Albany Ag. Warehouse, No. 10 Maiden Lane, and 23 Dean-st.
Aug. 1, 1846.

A FARM FOR SALE.

SITUATED in Florence, Erie Co O., containing 50 acres of good land, suitably proportioned in meadow, plow, pasture and woodland. On the premises are a good dwelling house and a small barn, a thrifty bearing apple orchard, with a variety of other fruit trees. Said farm is 3½ miles from Lake Erie, and is contiguous to good markets, churches, and schools. Any inquiry may be made by letter, post-paid, to H DEAN, No. 135 Bridge-st., Brooklyn, N. Y., or of KNEELAND TODD, on the premises. Price, $1.100.

August 1—2t*

MULTICOLE RYE.

THE subscribers will be prepared to fill orders for the Multicole Rye, to a small amount, for sowing this autumn. This Rye has thus far produced abundantly, and promises to be a valuable variety. It requires no more than three pecks of seed per acre, and is highly recommended to those who wish to sow for soiling, as it grows very rapidly, and may be cut early in the spring.

E. COMSTOCK & Co.,
August 1. Albany Ag. Warehouse.

DURHAM CATTLE FOR SALE.

THE subscriber being about to make new arrangemonts in his business, offers for sale his entire stock of thorough bred Durham Cattle, (25 in number,) of unquestioned pedigree, for which see American Herd Book. This herd has been selected and bred with great care, and with particular reference to their dairy properties. They have descended from the most celebrated herds in England, and are unquestionably one of the most valuablo in this country. Any inquiries by mail promptly answered by the subscriber.

PAOLI LATHROP
South Hadley Falls, Mass., Aug. 1, 1846.—3t.

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FRUIT TREES.

THE subscriber offers for sale, at the Kinderhook Nursery, an unusually fine assortment of Fruit Trees, comprising the choicest varieties of Apples, Pears, Plums, Cherries, Peaches. &c., now cultivated.

The trees are of good size, and exceedingly thrifty. The stock of Cherries, Peaches, and Apples, particularly, is very large, and of beautiful growth.

Also on hand, an excellent stock of Ornamental trees, comprising Eurepean Mountain Ash, European Linden, Evergreens, &c., Also, stocks and seedling trees.

Catalogues will be furnished gratis to all applicants. It is particularly requested that all orders be forwarded as early as possible, say by the 15th of October, so they may be executed as soon as the season will admit.

Trees packed in the very best manner, and delivered at the Kinderhook steamboat landing, or railroad depot, free of expense.

HENRY SNYDER.

Kinderhook, August 14, 1845—1t*

GUANO.—200 tons, the balance of the ship Shakspeare's cargo from Ichaboe, in tight casks, for sale in lots to suit purchasers, by E. K. COLLINS & Co., 56 South-st.

The many experiments made this season from this cargo, not only prove the great gain in using it, but that it is at least equal if not superior to any other guano.

Sept, 1, 1846.—tf

A FARM FOR SALE.

SITUATED about 3 miles from Hoosick Falls, on the road leading from said village to Troy. Said farm contains 107 acres, divided into grass and plow lands, and is watered by never failing springs and streams. The farm has lately been well fenced, and has necessary buildings. Further description is useless, as purchasers are requested to examine for themselves. For particulars enquire of J. Burrell, Esq., at Hoosick Falls, or the subscriber at Lansingburgh. ALEXANDER WALSH.

Lansingburgh, Sept. 1, 1846—1t.

FINE WOOLED BUCKS.

THE subscriber has had left in his charge, several bucks which are a cross between the Saxon and Merino varieties. They are two years old, of good size and form, and their wool, both in quantity and quality, would be found satisfactory. Further information given on inquiry. SANFORD HOWARD

[illegible] Albany [illegible]

NEW-ENGLAND AGRICULTURAL WAREHOUSE AND SEED STORE.

Nos. 51 and 52 North Market-Street, Boston.

FOR sale at this establishment, a general assortment of Agricultural and Garden Implements—Howard's Improved Patent Cast Iron Plows of all sizes. Martin's improved Eagle and other Plows; Double Mould Board, Side-Hill, Paring, and other plows, in great variety, and of the most approved patterns. Howard's Subsoil Plows, Cultivators of different descriptions; Willis' Seed Sower, (the best in use;) Geddes' and other Harrows of various patterns; Green's Straw-Cutters, Willis' Straw-Cutters, of various kinds and prices; Gault's Patent Churns, Grindstones or Friction Rollers; Cast Iron Field Rollers, (a very superior and substantial article;) Garden Rollers of cast-iron, different sizes; Iron Rakes of every size and variety; Garden Trowels, Syringes, in great variety; Pruning and Budding Knives; Pruning Scissors and Shears in great variety; Grass Hooks and Garden Shears; Garden and Field Hoes of every pattern; Scufflers every size; Pick Axes, Shovels, Spades, Dung and Garden Forks of every description; Hay Tools, including the very best Scythes manufactured in the country, (in all cases warranted;) Hall's and other Hay Rakes, Pitch-forks, Grain Cradles, Horse Rakes, Sickles, Austin's Rifles, Whet Stones, &c., &c.

Also a complete assortment of Chains, viz:—Fence Chains—Trace do—Ox do.—Dog do.—Tie-up do. Hale's Horse Power; Hale's Threshing Machine and Winnowing Mills, Garden Engines, &c.

Also Axes, Hatchets. Bill Hooks, Hammers; Axe, Hoe, and Rake Handles; Ox Yokes. Bull Rings; together with every other article important for Agricultural or Horticultural purposes.

Harris' Paint Mill, the best in use, is also for sale at this establishment.

SEEDS, TREES, AND PLANTS.

The subscribers are enabled to furnish seeds of the purest quality, of every variety of field, vegetable, and flower seed; embracing every variety desirable far cultivation.

Also, Fruit, Forest, and Ornamental Trees and Shrubs, of every description.

Also Hardy Herbaceous Plants; Roses, embracing 500 of the best varieties; Bulbous Roots in great variety. Green-House Plants, Grape Vines, &c.

☞ Orders promptly attended to. JOSEPH BRECK & Co.

Boston, Sept. 1—tf.

A GOOD FARM IN AUBURN FOR SALE.

THE subscriber offers for sale the farm on which he now resides, in the village of Auburn, Cayuga county, consisting of 152 acres of good grain and grazing land, well enclosed and watered, and upon which are one large, and three moderate sized DWELLING HOUSES, Carriage Houses, Barns, Sheds, and other necessary out-buildings, three Apple Orchards, a great variety of choice Fruit Trees and Shrubbery, four durable Springs, three wells, two hundred rods of full stone fence, and an inexhaustible QUARRY of a superior quality of grey and blue lime stone, suitable for cutting and dressing, eligible and convenient for a continued sale of that article, either rough or hewn, according to the demand, and from which most of the elegant stone buildings in Auburn were erected.

This farm extends from North-street to and across State-street, with a front of eighty-six rods on the former and one hundred and sixteen rods on both sides of the latter—upon either of which may be advantageously sold a great number of village lots, at the pleasure of the owner. About 22 acres, including the large house, barns, sheds, two orchards and garden, lie between North-street and the Auburn and Syracuse Railroad; 65 acres, including the stone quarry and one dwelling house, lie between said Railroad and State-street, and the remaining 65 acres, with two dwelling houses, lie west of State-street—all which is in a high state of cultivation, well fenced, conveniently allotted, and in good order. The whole farm, or either of the above parcels, will be sold cheap, and if desired, time will be given for the payment of a large proportion of the purchase money.

Inquire of Luther Tucker, of Albany, Hulbert & Hall, of Auburn, or the subscriber upon the premises. GEO. B. CHASE.

Auburn, Sept. 1, 1846—1t.

PATENT PREMIUM FAN-MILLS.

I. T. GRANT & Co., still continue to manufacture the celebrated Improved Patent Fan-Mills, at the old stand, Junction, Rens. Co., N. Y. These mills have taken the *first premium* at the following places:—New-York State Fair, at the Institute New-York, the State Fair, at Pennsylvania, and the State Fair a Maryland. The subscribers have no hesitation in saying tha these mills surpass anything of the kind ever offered in market. They are the only mill that has ever been produced that will chaf and screen wheat perfectly clean in one operation.

We also manufacture *Grain Cradles* of the very best quality, which have taken the first premium at the New-York State Fair. They are for sale at factory prices, at the following places:—

A. B. Allen's, 187 Water-st., New-York;
D. L. Clawson's, 191 " "
E. Comstock & Co.'s, Albany;
H. Warren's, Troy; and
Viall & Warren's, Mechanicsville, Saratoga Co., N. Y.

All orders thankfully received and punctually attended to. All goods delivered at Troy, N. Y., free of charge.

I. T. GRANT, & Co., Junction P. O., Rens. Co., N. Y

Feb [illegible]

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. III. ALBANY, OCTOBER, 1846. No. 10.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5—FIFTEEN copies for $10.00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

OFFICE IN NEW-YORK CITY, AT

M. H. NEWMAN'S BOOKSTORE, No. 190 BROADWAY,

where single numbers, or complete sets of the back volumes, can always be obtained.

☞ "The Cultivator" is subject to newspaper postage only. ☜

SCIENCE AND AGRICULTURE.

……

[IN 1845, the New-York State Agricultural Society, offered a premium of one hundred dollars for the best essay on the Connexion of Science with Agriculture. At the January meeting of the Society for 1846, a committee consisting of EBENEZER EMMONS, ANTHONY VAN BERGEN, and AMOS DEAN, to whom the essays offered under this head had been referred for consideration, reported that they awarded the premium to the following, of which JOHN J. THOMAS, of Macedon, is the author. It appears to have been the design of the writer of this essay to show the connection of Science with Agriculture in a strictly practical light—to show in what particular department science has already rendered the greatest aid, and in what direction the greatest assistance is still to be expected. This design has been carried out in a manner which can hardly fail to be satisfactory and beneficial.]

……

The past fifty years have been remarkably distinguished by numerous and extraordinary improvements in the useful arts. A great portion of these have resulted from the direct application of scientific principles. The wonderful advancement in nearly all branches of manufacture, which so eminently distinguishes the present century from the past,* is largely indebted to science. It was a thorough knowledge of chemistry and mechanical philosophy, that enabled James Watt to place the steam engine at once before the public as a powerful and efficient machine—a machine which has within the memory of middle-aged men, almost changed the face of civilized countries; and has spread towns, villages, and cultivated fields, in regions where, but for this invention, nothing would be seen but unbroken forests.

Very great advantages have resulted from the precision with which the principles of mathematics and mechanical philosophy, may be applied in arriving at practical results. The accurate knowledge of pressure and force, in constructing machinery, and in civil engineering, which calculation enables us to obtain, before trial, is of the greatest importance. The mathematician, who knows the force of gravity, may sit in his closet and tell us, without error, the velocity of a falling body, and the precise increase in its rate of descent; or he may determine, by calculation, from a knowledge of this velocity, the exact length of a pendulum to beat seconds. The engineer may ascertain, before he erects his work, the best form of an arch, to afford the greatest strength against the pressure of a superincumbent weight; or he may calculate accurately, the angle at which the lock gates of a canal should meet, to give the greatest security against the pressure of the head of water upon them, before a single trial has ever been made.

Interesting and important practical results are also obtained in the manufacture of various articles of commerce, by the application of the principles of chemistry. Geology has rendered great aid in the art of mining, in all its departments. Not only in explorations for the more valuable metals, but for the coarser, but not less important articles, salt and coal, tens of thousands might often have been saved, by a knowledge of the relations and character of the rocky strata at the surface of the earth.*

The precision with which the principles of natural philosophy have been variously applied in machinery and engineering,—and chemistry and geology in manufactures and mining,—has led to the apparently plausible conclusion, that not less important results might be at once obtained by the application of science to agriculture. From the rapid advancement of science within the present age, the opinion seems to be gaining ground, that some great and extraordinary results are about to take place; that the slow progress in agriculture which practice and experience have effected, will soon commence taking more rapid and powerful strides; that we are about to remove the veil of obscurity and uncertainty, which hangs over so many operations in culture, understand every process, and so completely control the growth of plants, as almost to set man free from the labor of tilling the earth by the sweat of his brow; or in other words, that the agricultural millenium is near at hand. But a more thorough examination, will clearly show that we have no reasons for drawing such a conclusion; that the other sciences, have as yet, accomplished directly, but little for agriculture; and that years of slow and patient experiment must yet determine many points, which are already by many persons taken for granted. The same precision with which conclusions have been arrived at in other arts, is entirely out of the question here. A great deal of uncertainty must, for a long time yet to come, attend the application of other sciences to the art of cultivation. The investigation of questions strictly chemical, is far easier than to determine the intricate and combined relations existing between chemistry and vegetable physiology. In the first place, the analysis of soils is one of the most difficult of all kinds of earthy analysis. In the next, vegetable chemistry is involved in a great deal more uncertainty than other departments of the science. Thirdly, the changes which are constantly taking place in the growth of plants, variously influenced as they are by the atmosphere, by drought or moisture, by the nature of the soil and the many different materials of which it consists, some fitted for assimilation, and others not,—are from these causes, and the time required to effect them, and the minute quantities of matter controlling them, often entirely beyond the closest observations, and can be determined but very imperfectly by an examination of the final results.

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* A single instance of this advancement is mentioned by J. F. Herschel, in the fact that a man can now produce about two hundred times as much cotton goods, in a given time, from the raw material, as he could seventy or eighty years ago.

* Some years ago, twenty thousand pounds were expended in England, in a useless search for coal in Hastings sand. Although there were some apparent indications, a geologist could at once have predicted failure. "All are familiar," says James Hall, "with the mining enterprizes, now less frequent, in search of coal along the valley of the Hudson; in which there have been expended more than half a million of dollars within the last fifty years." And Murchison, in his treatises on the geology of Wales, remarks, that more wealth has been expended in the useless search for coal in that part of the country, than all the geological investigations of the whole world have cost.

Now, the object of these remarks, is not to denounce nor discourage the application of science to agriculture; but, directly the reverse, to prevent a total rejection from the disappointment and disgust, which must follow the practice of holding up false hopes. If an enterprise is attended with peculiar difficulties, that enterprise is not forwarded by representing it as easy of accomplishment, by concealing its difficulties and overstating its advantages. Those who are falsely allured at the outset, will, from the disappointment resulting, be led to refuse even the benefits which might be secured. Hence, one of the greatest injuries to science, is to invest it with false colors. On the other hand the highest benefit is to strip it of its artificial dress, and exhibit its true character, that proper caution may be used, and success instead of chagrin be the consequence.

A brief glance at the different ways in which science is expected to benefit agriculture, may serve to show in what direction the greatest assistance will be afforded.

In the first place, a more certain result is to be looked for in no quarter, than in the application of the principles of mechanical philosophy to the construction of farm implements and machines. A great and decided benefit has already followed from this cause; and no doubt machines might be much improved, simplified, and rendered lighter, and at the same time stronger, by a strict observance of the nature of forces, of the mechanical powers and elements of machinery, to determine precisely where strength is indispensable, and where also it is not needed; and in changing and adapting the moving power in the best possible manner to effect the intended purpose. It is highly essential, that every thing of the kind in constant employ, and requiring for its use, perhaps thousands of repeated motions of the hand in a single day, should not be encumbered with a needless pound in weight. The laborer who uses the hand-hoe, usually makes with it no less than two thousand strokes in an hour, or twenty thousand in a day of ten hours. If in any part, where strength is not needed, it is made unnecessarily heavy, even to the amount of half a pound, then the aggregate force uselessly expended, would amount to no less than ten thousand pounds, or five tons, in a single day. In larger machines, worked by horses, including wagons and carts, as well as threshing machines, and even plows and harrows, there is no doubt in nearly all cases a waste of power. A strict regard to mechanical principles, and their mathematical application, throughout the numerous implements, tools and machines, constantly in use by every farmer, would be of the highest benefit. An entire volume might be written on this subject alone. It is true that the manufacturer of these, is the person directly concerned; but farmers too are deeply interested in the improvement.

Those sciences, however, which are regarded as more particularly and directly applicable to agriculture, are vegetable physiology, and chemistry, and geology. The intimate connection between vegetable physiology and vegetable chemistry, and between geology and the chemistry of the soils, render them all in a manner inseparable, and they will be mostly considered together.

The relations of vegetable physiology to the practice of horticulture, are vastly more important than to agriculture. The far greater number of species which come under the cognizance of the horticulturist, and the variety of treatment they need, render it very necessary that he should understand the nature of acclimation, the influence of heat, cold, moisture, and fertility, on the germination, and action of the roots, stems, leaves, and various other parts of plants. Such knowledge would be also highly advantageous to the enterprising agriculturist, whose object, aside from the profit, is to introduce new vegetable productions for general culture, and who should therefore understand the effect of removal to an unlike climate and soil.

But this science often becomes very useful to the common farmer. A knowledge of physiology, and of the enormous quantity of moisture which plants perspire insensibly from the leaves, would have wholly prevented the very common and pernicious error, that weeds preserved moisture in the earth, and shade contiguous plants from the effect of drought, while in fact every weed is an outlet through which moisture as well as nourishment is rapidly drained from the soil. An acquaintance with the principles of botany would have prevented the prevalence of the equally pernicious notion, that the weed so common in wheat, termed chess, could ever be transmuted to wheat, a plant not only of a different species, beyond the boundary of which, a plant by no change ever passes, but is also of a different genus. A knowledge of the fact, that no root of a plant can long remain alive, which in a growing state, when deprived of its breathing apparatus, the leaves, would have prevented the wild attempt practiced some years ago, of endeavoring to destroy patches of canada thistles, by carefully digging up every fibre of the roots from a depth of several feet; while a simple, obvious, and efficacious remedy consisted in merely starving the roots, by cutting off unremittingly the supply from the leaves for a proper length of time. Were the vital importance of the leaves to the health and perfection of the seeds of plants properly understood, the practice of "topping" corn would never have been resorted to. In numerous other cases, this science serves to throw light on operations of culture, and to assist correct practices.

An intimate and important connection exists between agriculture and chemistry combined with vegetable physiology. In some cases, considerable accuracy of reasoning, and certainty of application may exist; in others, all seems as yet involved in uncertainty. The triple relations of the analysis of plants, of soils, and of manures, and the determination of the constituents of each, promise, perhaps, more important results than any other department.

The knowledge of the organic constituents of plants, composed of various combinations of the four elements, carbon, hydrogen, oxygen, and nitrogen, may afford some very useful suggestions in practice. By knowing for instance, the proportions of these constituents, we can often arrive at a comparative value of different kinds of grain. Analysis shows that some vegetable products contain more starch than others; some abound in gluten; some contain a large portion of oily matter, and others are distinguished for other ingredients. Now, some of these are best adapted to one object, and others to another object. If for instance, in feeding animals, it is intended to fatten them, those grains would be pointed out as best, which most largely contain oil; if to make them grow in flesh and muscular parts, those which abound in gluten; if the object is to make a cow yield butter, food containing oily matter should be given; if to yield cheese, beans, peas, and clover should be given; and if milk in quantity merely, succulent food should be employed. But although in these instances, analyses may suggest useful practices, yet the *amount* of the benefit must be determined by practice. Theory may point out one course as better than another, but the difference may be so small, as not to merit attention in practice, which can only be determined by direct experiment.*

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* All results of this kind are greatly influenced by circumstances. For instance, experiments accurately conducted, have shown

The difficulty of arriving at a correct practical conclusion, in relation to the quantity of nutriment in grain and other food by analysis, will be evident from the fact, abundantly proved by some of the best farmers in New-England as well as in Western New-York, that corn ground and boiled with water, is more effective in fattening hogs, than twice the amount fed in the dry grain.

Analysis, in other cases, will show the comparative value of different varieties of the same grain. A very valuable ingredient in wheat is gluten; of this, French wheat has been found to contain 12 per cent.; Bavarian, 24 per cent. H. Davy obtained 19 per cent. from winter, and 24 from summer wheat; from Sicilian, 21, and from Barbary wheat, 19 per cent. But the uncertainty of permanent dependance on such analysis is proved by the fact that the nature of the soil may considerably influence the result. Hermbstædt found that the same wheat which, with vegetable manure only, gave scarcely 10 per cent. of gluten, yielded more than three times as much when manured with powerful animal substances, rich in ammonia. Some varieties of the potato are found to contain more starch than other varieties; and this quantity is also controlled to some extent by soil.

The analysis of plants will also indicate what plants are best to employ as manure by plowing in the green crop. A considerable portion of nitrogen is essential to the growth of wheat. Now clover is also found to contain a large portion; hence a crop of clover becomes eminently useful as manure for this grain. Wheat abstracts its nitrogen chiefly from the soil, and is consequently exhausting; clover obtains it mostly from the air, and is not exhausting, but becomes in this way the provider for the wants of the wheat.

Analysis has also proved that in addition to the usual organic elements, there are about ten organic or earthy constituents, most of which are invariably found in the same species, and are indispensable to its healthy growth. These are potash, soda, lime, magnesia, alumina, silica, iron, manganese, sulphur, phosphorus, and chlorine. These substances are derived by the plants from the soil; hence a fertile soil,—one from which plants may draw these essential constituents, must of course contain them. Here the intimate relation between the constituents of plants and of soils is at once obvious. Hence soils which are destitute of a part of these ingredients, or contain them in very small proportions, is necessarily sterile; or if they be destitute of one only, the same result must take place, if that one is an essential ingredient of the crop growing upon them.[*] And here it is that the great benefits to be derived from analysis of soils, at once force themselves upon the mind. If a soil is barren, determine its constituents—see what is wanting—what is in excess; apply at once the deficient ingredient, or counteract or neutralize the injurious one, and fertility is restored. A soil was shown to H. Davy, which, though apparently abounding in every enriching material, was incapable of yielding a crop. He found by examination, that it was poisoned by a considerable portion of sulphate of iron or copperas. He decomposed this sulphate by applying lime, and the difficulty was removed. Here the remedy was simple and certain; but such cases very rarely occur in practice.

As different plants draw from the soil the same substances in unlike proportions, analyses of these plants will show which substances are most largely needed for the different crops. And it points out a reason of the fact long since known, that a field which may bear a profitable crop of one kind, may be unable to yield a good return of another; and that by alternation or rotation, different portions are variously abstracted, and time left for the restoration of each by various processes in nature, and by artificial means. But the fact that these ingredients vary in the same plants, shows the great necessity of caution in drawing practical conclusions. Justus Liebig, one of the most eminent chemists of modern times, but whose deductions are often deficient in value from a want of sufficient corroboration by actual experiment in cultivation, says that one hundred parts of the stalks of wheat yield 1.55 parts of inorganic constituents; barley 8.54 parts; and oats only 4.42 parts, all being of the same composition. "We have in these facts," he then adds, "a clear proof of what plants require for their growth. Upon the same field which will yield only one harvest of wheat, two crops of barley and three of oats may be raised." But every good farmer knows that oats is exhausting to an extraordinary degree, instead of being less so than barley, and only one-third as much as wheat, according to this conclusion of Liebig. Some of the best farmers of New-York, never suffer an oat crop to grow on land ever appropriated to wheat. Professor Johnston has, however, demolished Liebig's reasoning, by showing that these inorganic constituents are not only different in composition, but greatly variable in quantity, the oats sometimes considerably exceeding the barley, and the wheat varying from 3.5 per cent. to 15.5 per cent. But neither of these chemists appear to have considered the composition of the *grain*, nor to have remembered the difference in the *weight* of the crop. Superficial reasoning and general theories often appear beautiful; but thorough investigation in detail, and the results of actual practice, will frequently exhibit their uncertainty and error.

A department of analysis, perhaps the least liable to erroneous results, is the examination of *manures*. Fertilizing substances are known by their effects applied separately to plants or in mixture; or by the fact that fertile soils and well grown plants are found to contain them. Now, analysis will show what proportion of the fertilizing materials exist in different kinds of manure; and hence the value of manures may be ascertained, at least to some extent, by a previous chemical examination. A comparison of common manure with guano, exhibits this principle in a striking light:

A ton of	manure	yields	2	pounds and	4	ounces of	potash.
“	guano	“	66	“	8	“	“
“	manure	“	1	“	10	“	soda.
“	guano	“	36	“	15	“	“
“	manure	“	5	“	1	“	phosph. acid.
“	guano	“	283	“	9	“	“
“	manure	“	1	“	4	“	sulph. acid.
“	guano	“	93	“	8	“	“
“	manure	“	1	“	9	“	chlorine.
“	guano	“	62	“	00	“	“ [*]

Here it will be seen that most of these enriching ingredients are from thirty to 70 times as great in quantity in guano as in common manure. Experiment accordingly proves that guano often produces from thirty to seventy times as great a growth in plants, as an equal quantity of manure.

One of the most powerful manures is poudrette, a preparation from night-soil. Let us see what kind of comparison analysis will draw between this substance and guano:

A ton of	night-soil	yields	6	pounds	7	oz. of	potash
“	guano	“	66	“	8	“	“
“	night-soil	“	4	“	10	“	soda.
“	guano	“	36	“	15	“	“
“	night-soil	“	120	“			phosph. acid
“	guano	“	283	“	9	“	“ [*]

Here we see that guano still vastly exceeds even night-soil in these important requisites to fertility;

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that Indian corn, ground and boiled, will fatten hogs more than twice as fast as the same amount of raw material.

[*] Those plants, says C. W. Johnson, which yield salt, never grow well on lands which do not contain it; those in which carbonate of lime is found never flourish in soils from which this is absent. Plants which abound with nitrate of potash, such as the sun-flower and the nettle, always languish in soils free from that salt; but when watered with a weak solution of it, their growth is very materially promoted, and saltpetre is then found in them, upon analysis, in very sensible proportion. The same writer states, that an old pasture became, in spite of various liberal top dressings of different manures, incapable of producing a luxuriant crop. At last peat ashes were found to produce the best result, or an increase of more than a ton of hay per acre. These peat ashes were found to contain one-eighth of their weight of gypsum, which was the ingredient the soil needed. Gypsum itself was then applied with the same successful result.

[*] London Ag. Gazette

although the latter possesses a very striking superiority in composition over common manure. We accordingly find in practice, that the comparative value of these different manures is very nearly the same that analysis indicates, when the average of experiment is taken.

There are many other substances which chemistry points out as valuable for manure, which are found useful in practice. Many of these, however, if used singly, or mixed with only one or two others, often give uncertain results, frequently prove failures, and sometimes are a positive injury. Sulphate of ammonia, nitrate of soda, sulphate of lime, silicate of potash, and other salts have been known to produce extraordinary growth; but in other cases were valueless. So many causes control their action, that this uncertainty must continue to exist. The soil may be already supplied with them; drought may derange entirely their action; and other influences now unknown may produce a similar result.

Common barn-yard and stable manure, though not so powerful, appears to be more universally beneficial than any other from the certainty of its operation. This certainty is dependent on the great number of its ingredients. It contains a large portion of decaying vegetable matter derived from the pulverized hay consumed by the animal; it is rich in ammonia and other animal matters, resulting from the secretions; and it contains many salts derived from both these sources. Poudrette possesses nearly the same advantages; and guano, from its great quantity of animal matter and enriching salts, rarely fails if properly applied. With single substances, however, there is great uncertainty, until experiment points the way.

Wheat was found by H. Davy to contain more nitrate of potash than any other farm product; yet the author of British Husbandry says, "although it has generally occasioned an increase of straw, the yield of grain has not been improved, and the crops have in many instances been found unusually subject to mildew." Similar experiments, by the writer, have produced no favorable result. Hence we perceive that supplying, simply, an essential ingredient, does not always answer the purpose. Artificial guano, made by an observance of the analysis of the natural though useful, has not been found nearly so powerful as the latter. Nitrogen, supplied properly to plants, causes a healthy and rapid growth; yet although this element exists uncombined as a component of the atmosphere, and in direct contact with the leaves of plants, they will perish for want of it before they will draw a particle of it from the air. Hence in all chemical deduction relative to manures, the experiments of the cultivator only are to be depended on, and to remain as the decisive test. Suggestions of incalculable importance may come from theory, but practice alone must prove their value.

The importance of the analysis of soils, to determine deficient ingredients, and then to supply defects, has been already adverted to. Although its value thus appears to be very great, and has been much extolled by chemical writers and their imitators, yet there are difficulties in practice which render extreme caution in drawing conclusions very necessary. The constituents of plants may indeed be determined with much accuracy; and the different ingredients in manures, and their consequent adaptation to those plants, and of their comparatively fertilizing effects, may be ascertained frequently in the laboratory. But the extensive diffusion of these ingredients through broad acres of soil, and the exceedingly minute proportion which some bear to the whole bulk of the soil, renders the determination of these proportions, if not the actual existence of the ingredients, difficult if not impossible. A distinguished chemist told the writer, that for ordinary earthy substances, the detection of a thousandth part required skilful analysis. Minuter portions of some constituents are more easily detected than of others. But suppose a ten-thousandth part the utmost limit for agricultural practice, a few instances will show the inadequacy of analysis in cases which may occur:

A considerable portion of sulphate of lime or gypsum is found to exist in red clover, and other leguminous plants. Hence a reason that gypsum so eminently benefits the growth of red clover. And hence reason would here suggest, that to determine the fitness of a soil for clover, an analysis should be made; if it contain gypsum all is right, and the clover will flourish; but if not, then a dressing of this material must be applied. This is the theory. Let us compare it with practice. A hundred pounds of gypsum to the acre has often doubled the clover crop; and a tenth part of that quantity, or ten pounds to the acre, will produce in some cases very sensible effects. After it is spread on the ground, and before any sensible effect is produced on the crop, the rain has usually dissolved it and carried it into the soil and among the roots of the young plants. It thus becomes intimately diffused through the soil. Now, will analysis detect its presence? If the soil is a foot deep, half a grain to a pound will indicate a hundred pounds to an acre. Yet this half a grain to a pound is only one fourteen-thousandth part; though often producing a most luxuriant growth of red clover. A tenth part of that is only one hundredth and forty-thousandth part; yet this minute portion often is found to exert a very visible influence in growth; though far beyond the reach of ordinary analysis. A crop of clover of a ton and a half to the acre, contains only three times this amount, or thirty pounds of gypsum in its stems and leaves.

Again; twenty pounds of muriate of ammonia applied to an acre of rye added five bushels to the product.* But this is only one seventy-thousandth part of the soil. One hundred and forty pounds of guano *added* more than sixteen hundred pounds to an acre of hay. But this, manure, when diffused through the soil, constituted only about a ten-thousandth part; its proportion of phosphoric acid, forming about one eighth, and a very important ingredient, would be about one eighty-thousandth part; its sulphuric acid would constitute less than a two-hundred-thousandth part, and its potash about one three-hundredth-thousandth part. I am not aware that many chemists claim sufficient skill to determine such small proportions in the soil; yet these experiments show their great practical influence when existing as added constituents.

The ammonia of the atmosphere is considered by eminent chemists as holding a very important relation to the healthy and vigorous growth of plants; yet its presence has never been directly detected, and only indirectly by favorable opportunities when absorbed in snow or rain-water. Eminent and accurate experiments had not discovered even this until within a few years.

It is not denied that a bright light may be thrown on the practice of agriculture by carefully conducted analyses of soils. The results of many examinations which have been made, show frequently a very striking difference between fertile and barren soils. But these analyses were conducted with the most rigid care and accuracy by men of such skill and eminence as could hardly be expected to be at the service of any common practical farmer. And after all accurate experiments in cultivation would determine all that is necessary in many points of practice, and would in any case be needed as a test of the truth of the theory.

It is to be hoped that chemists will continue to pursue their investigations on doubtful points, until certainty, if possible, may be arrived at; and that all well-established facts may have as extensive application in farming as their value merits. But it must be admitted that there has been a disposition to take too much for granted, and to overstate the certainty of success in connecting chemistry with agriculture. The precision so striking in other sciences, and other applications of this science to various arts, does not hold in case of the growth of plants, which, though governed by fixed laws, is too much controlled by circumstances and too much obscured from view, to be thoroughly understood. This growth is slow and imperceptible to the sight; plants are surrounded by an invisible air above ground, and are hidden from view below ground; their surfaces receive nourishment by pores only seen by powerful microscopes; the nourishment is drawn from vapors and floating gases in the air, and liquids in the earth charged with many substances in minute proportions; and the whole process is entirely beyond the reach of the closest scrutiny of the eye.

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* Johnston's Lectures, Appendix, p. 89

It is not surprising therefore that there should be a difference of opinion among high authorities. The constituents of vegetable mould have led to much dispute, and no less than twenty different substances have been discovered or named by various chemists. Dr. Dana, in attempting to prove the inutility of applying lime and potash as manures, shows that nearly all soils contain lime and potash enough for the growth of all the crops which may be produced on the land for thousands of years. Yet other chemists dwell on the importance of these substances applied as manures, and direct experiment shows their utility.[*] Liebig says that "wheat does not flourish in a sandy soil, and that a calcareous soil is also unsuitable for its growth unless mixed with a considerable quantity of clay "—" because these soils do not contain alkalies in sufficient quantity." But Johnston shows not only that excellent wheat crops are reaped from those soils, but that turneps, universally admitted to be finely adapted to sandy land, contain in a single crop of ordinary productiveness, nearly ten times as much potash and soda, as a crop of fifty bushels of wheat with the straw included. The contradictions of chemists on the single article of gypsum alone would perhaps fill a volume. According to Kollner, its action depends on the power possessed by lime to form, with the oxygen and carbon of the atmosphere, compounds which are favorable to vegetation; according to Mayer and Brown, it merely improves the physical properties of the soil; while according to Riel, it is an essential constituent of the plant. Hedwig called it the saliva or gastric juice of the plant; Humboldt and Thaer considered it a stimulant; Chaptal ascribed its action to a supposed power of supplying water[†] and carbonic acid to plants; and Davy regarded it as an essential constituent of plants.[‡] According to Liebig, it fixes the ammonia of the atmosphere; according to Sprengel, it supplies sulphur for the formation of the legumin of leguminous plants; and according to Dana it merely assists the decomposition of other substances in the soil.

The question has been much oftener asked than answered, "Who shall decide when doctors disagree?" If great men who have spent their whole lives in examining such questions, are so much at variance, to what power is the farmer to look, to dissolve the thick mist and remove his doubts, in relation to such matters? The answer cannot be avoided, *To repeated, varying, and actual experiments in practical cultivation.* Such experiments have long since established the value of gypsum, lime, and other manures; while eminent chemists are still disputing not only on their theory of action, but whether they are really of any value whatever.

The distinction must be drawn between *The Application of Science to Agriculture,* and THE SCIENCE OF AGRICULTURE. The former has been already explained; the latter consists of the facts which practice has established, and the truths it has developed, reduced to a system, and in some degree arranged under fixed principles. The Science of Agriculture explains the theory and operations of draining plowing, subsoiling, and manuring, of rotation of crops, of cultivating the soil, of adapting culture to crops, and many other practices which distinguished the best modern specimens of farming. It is a systematic arrangement of knowledge, which the experience of centuries has accumulated. Many of its principles, it is true, are those of other sciences; but they were usually discovered in the course of cultivation, before those sciences had a distinct existence. A professor of one of our colleges has cited the practices of draining, subsoil plowing, trenching, and clovering and plastering, as specimens of the application of science to agriculture. But these have all resulted entirely from experience; they are indeed specimens of scientific farming, but they originated from the science of agriculture, as just explained, and not from science *to* agriculture in its common acceptation.

The best modern practices of agriculture, are in nearly all cases much in advance of the theory. It is for this reason that the cause of agricultural improvement would be much better served by holding up for imitation the experience and management of the best farmers of the day, rather than a too frequent reference to chemical authority. How many of our citizens might have avoided shipwreck of their property, and made handsome profits, if they had followed the best established courses of cultivation. But, have any failed for want of knowing the sciences? Some of our farmers make money rapidly,—that is, they farm *well.* Others make a scanty living; and others are reduced to insolvency. What is the reason of the success of the former —what the cause of the failure of the latter? Is it a knowledge of chemistry in one case, and a deficiency in the other? No one will ever think of ascribing the results to such causes.

It is not denied, that important aid may yet be derived from agricultural chemistry. But its advance must be slow and attended with caution. Years of careful and accurate analyses of soils, and of the trial of manures, separate and mixed, in connection with experiments on growing crops performed with the utmost judgment and precision, can only settle uncertain points. Reasons will thus be rendered clearer by science, and practices explained, enforced and established. But these experiments must be performed chiefly by the enterprising few, and not by the common farmer. The study is indeed deeply interesting and fascinating; and every one who has a knowledge of the natural sciences, will not unfrequently find useful applications in the every-day business of life. But to hold them up as a means by which the young farmer is to conduct his business most profitably, while he yet remains wholly or partially ignorant of the most improved modern systems of practice and management, cannot be followed by the best results. The most important knowledge must be first attained, and afterwards that which is less essential in practice. If possible, neither should be neglected. We should not denounce any study because it is encompassed with some difficulties. Chemistry is affording many valuable suggestions for trial and practice; and as Professor Johnston very justly remarks, "It is foolish to refuse to avail ourselves of the morning light because it is not equal to the mid-day sun."

IS DEEP PLOWING ALWAYS BEST.

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L. TUCKER, ESQ.—It appears to me, an error exists in the minds of some agriculturists, on the subject of deep plowing, especially in cultivating light soils, except where heavily manured.

The prevailing opinion has been, and probably still to a great extent obtains, that, to be a good farmer or planter, it is necessary to plow deep, without reference to the depth of the soil. We find crops designed for premiums, usually plowed deep, and of course manured strongly; doubtless this is the best method for that purpose. I have invariably found deep plowing on deep and rich soils to answer well. On alluvial soils, (for example, on some parts of the Mississippi bottoms,) by plowing deep, a richer mould is often turned up.

A few years since I had a piece of pasture sward turned over for a winter crop, plowed about three inches deep, sowed, and the grain harrowed in, and bushed smooth, which produced a good crop. Another piece of similar ground, a few rods distant, was broken deep, (about 8 to 10 inches,) cross-plowed, and grain harrowed in, but the yield was not half to the former. Since that time, where the soil is thin, I guard against plowing below it; believing that the best soil is usually at the surface.

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[*] It has been asserted by Liebig and others, that the benefit of lime is owing to the potash it contains. Lime has been applied with great success to soils in Western New-York, which contained many broken fragments of limestone. The lime was from localities, where, by the analysis of Dr. Beck, no potash existed.

[†] The opinion that gypsum owed its efficacy to the absorption of moisture, has been common in this country. H. Davy exposed a portion of gypsum to the air three foggy nights, and found it absorbed only a 720th part. Calculation will show that two bushels spread over an acre, would absorb at the same rate, a stratum of moisture only one-millionth of an inch in thickness, or five thousand times thinner than paper.

[‡] Hlubeck.

Much of our land in New-England, is too porous to be benefitted by subsoil plowing. It is doubted whether it pays for the labor in stiff and rich lands; except for root plants. It costs more than double the power to plow twelve inches in depth, than six.

S. Tillotson.

Canton, Ct., July 20th, 1846.

AGRICULTURE.

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Mr. Tucker—As a science, agriculture includes in all its branches, a knowledge as extensive, and as difficult completely to master, as many of the learned professions. It is a field continually open for new investigations, and within a few years, since men of learning have given their attention to it *as a science*, many are the advances which have been made towards elevating it to a standard which it justly deserves. There are doubtless many who are far excelled in some of its ramifications, but very few who have attained that perfection which places them beyond the point of being taught. It is a pursuit which offers the liberal mind opportunities for research and experiments which are denied him in almost every other branch of science. If he turns his attention to these, after much severe toil and labor, he is doomed to meet with disappointment, having learned that the perfection to which the science has already attained, leaves no room for his researches. But let him devote his enthusiastic toil to agriculture, and if he does not make some important discovery, he may go far towards arranging the thousand discordant facts which have been handed down from time immemorial.

It is to be regretted that there is not among the majority of farmers, a more inquisitive spirit in regard to the nature of the objects with which they are so intimately connected, and from which they expect to derive, not only their subsistence, but their hope of gain. The leading object of Agriculture, is to increase the quantity, and improve the quality, of the productions of the soil, and to do it with the least expenditure, or in other words, with the greatest profit, without impoverishing the soil. In order to accomplish this, we must resort to experiments, and here again opens a wide and extensive field. In consequence of the great variety of soils, experiments in different kinds, though nearly of the same nature, will not produce like results.

The leading principles of agriculture are ever the same; animal and vegetable matter, after decomposition, furnish food for plants, while heat, air, and moisture, aid in nutrition.

There is nothing, practically considered, which has done more towards improving the minds of a majority f farmers, than the circulation of a well conducted agricultural paper. It is a means, when contributed to y able and practical farmers, by which every man nay derive new and useful information. Its contents re made up of the results of the most careful observation, and consists in itself of a general storehouse of owledge from which all may draw something new d servicable. It also furnishes a common medium r farmers to communicate and receive instruction, hus enabling them to profit by the experience of each ther. Among the list of agricultural papers, none ank higher (or have a greater circulation,) than the ultivator, and it is only regretted that it does not make t friendly visits more frequently.

Middlebury, Vt, July, 1846. H. L. Sheldon.

Cut [illegible] stakes while the bark will "run," and peel hem. They are stronger and lighter than stakes with [illegible]

FARM ACCOUNTS.

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Mr. Tucker—In order for a farmer to decide which are the best and most profitable crops he raises, he must keep a correct account of the debits and credits of each.

To do this, he will do well to keep a journal of daily transactions, and from that post into an account book. Something after the following manner his journal may be kept:

May 1, 1846.

Fri.	Cloudy and rainy. Wind from N. E.	
	F. plowed ½ day in lot No. 2., ...	$1.00
	G. reset fence between lots 3 and 4,......	50
Sat.	Cloudy, rainy, and cool. Wind from north.	
	F. finished plowing for oats in lot 2, ...	1.25

The form of the Account Book or Ledger.

Oats. *Dr.* *Cr.*

		Dr. $	c	Cr. $	c.
1846.	Lot No. 9. Two acres.				
April 14	To 2½ days' plowing, ...	5	00		
" 22.	" 5 bushels of seed, @ 40 c., ...	2	00		
" "	" sowing and harrowing, ...	1	50		
	Lot No. 2 Five acres.				
May 2.	To 4 days plowing, ...	8	00		
" 5.	" 1½ " rolling, ...	2	00		
" 6.	" 14½ bushels seed, @ 40 c., ...	5	80		
" "	" 2½ days dragging, ½ day sowing, ...	4	62		
	Lot No. 9.				
Aug. 20.	To 2 days harvesting, ...	2	00		
	" drawing in, threshing, and cleaning, ...	4	50		
	By 100 bushels oats, @ 3s., ...			37	50
	" straw			3	00
	Lot No. 2.				
Sept. 1.	To harvesting, drawing, and threshing, ...	16	25		
	By 250 bushels oats and straw, ...			101	25
	By balance, ...	90	08		
		141	75	141	75

In this manner an account of each crop can be kept, which will show the cost and profit, the lot in which it was raised, and the amount per acre; also the time of sowing and harvesting, which will be a satisfaction that will overbalance all time and trouble.

D. H. Wright.

Moscow, N. Y., May 9, 1846.

SPRING HILL PIPPIN,

Strong's Newtown Pippin, Seedling Newtown Pippin.

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Mr. Tucker—About the year 1825, Judge Strong, of Long Island, planted some seeds of the genuine Green Newtown Pippin apple, from which he now has three large trees that have borne fruit for six or seven years. The fruit of all of these assimilates so closely to that of the parent tree, that it would be immediately recognized by an ordinary observer. One of these seedling fruits is remarkable for its fair and perfect form, presenting the character of an improved variety, it being of the same high flavor, and of the appearance of the finest specimens that can be selected of the old kind. The tree is also of much more vigorous growth than the old variety, which constitutes a most important improvement, as it has been a subject of regret that the parent tree is of only moderate growth, with a rough bark. To those pomologists who believe in the exhaustion of the varieties of fruits, a great relief will be afforded by the production of a new seedling Newtown Pippin. Scions for 100 trees were presented by Judge Strong, in 1845, to Wm. R. Prince, proprietor of the nurseries at Flushing, who has that number of trees growing therefrom; and the present season, Mr. P. has ingrafted and budded 500 more from the original tree. We may therefore feel assured that through the exertions and extensive correspondence of Mr. Prince, this highly estimable variety will soon become widely disseminated. The Spring Hill Spitzenburg, which is a seedling of the Esopus Spitzenburg, was also originated from seed by Judge Strong, and by him presented to Mr. Prince.

VARIETIES OF WHEAT.

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Mr. Tucker—I perceive an advertisement of seed wheat for sale in your August number, upon which I wish to offer a few remarks. I think those who offer seeds of any kind for sale, should give a short description of the general characteristics of the plant. The Soule wheat is a very prolific variety—large stiff straw, more liable to blight or rust than the White Flint; shells very easy, and there is much more complaint of its being injured by the wheat worm. I think it ought to be sown only upon rather dry or rolling land. The White Flint is less liable to rust, and will not waste in harvesting, even if it stands several days after it is fit to cut.

The Mediterranean wheat is the surest wheat that is grown, and the least liable to rust; straw rather small, and is quite apt to fall. For those who wish to grow for their own domestic use, it is preferable to any other variety, because more sure of a crop, and will make more flour to the bushel. The objection to this wheat is, that the flour is of a reddish cast, and does not sell well in our market. The writer of this sent several barrels to Albany last spring, and it would not fetch within one dollar per barrel, what flour of the White Flint variety brought; yet I have not the least doubt it would have made several pounds more bread than the other.

Spring Wheat.—I have tried the Black Sea wheat. The straw is very limber—so much so that it was impossible to cut it with a cradle; soil, sand and gravelly loam. Possibly it may stand better on a more calcareous soil. The yield, I think, will be good.

I perceive your enterprizing correspondent, S. W. Jewett, has produced, as he supposes, a new variety of winter wheat from the summer variety of Black Sea wheat. I fear he has drawn his conclusions too soon. And why? The winter of 1841 was very mild here, and hundreds of stools of the common two-rowed barley, where wheat was sown after said crop, stood through the winter, and produced fine long ears, which ripened ten days earlier than the wheat—and yet I do not think any one would think of calling it a winter variety on that account. **Wayne.**

WINTER WHEAT DERIVED FROM SPRING WHEAT.

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Mr. Tucker.—In a communication from S. W. Jewett, Esq., in the August number of the Cultivator, he gives the process by which he obtained a good yield from a fall sowing of the Odessa or Black Sea wheat. In confirmation of his experiments, tending to show that it may be cultivated as a winter variety, I will state a few facts that have come within my own observation.

On the 1st of Nov., 1843, Mr. Jared Goodale sowed one bushel of Black Sea wheat. The ground froze soon after the sowing, and remained so until the opening of the spring, when the wheat came forward finely, and at harvest gave twenty-eight bushels from the one. The berry was lighter colored, but heavier than the spring sown grain.

In the fall of 1844, Mr. A. Smith sowed about two acres with the Black Sea wheat. I saw it just before harvest, and thought it promised fair for at least thirty bushels to the acre. I never learned how much it actually did yield; but will say it was such a piece as farmers might be proud to raise. Mr. Smith afterwards told me that it made superior flour. Both of the above pieces were sown with seed raised from spring sowing that season, without other preparation than is usual for common winter wheat.

In the fore part of September, 1845, Dr. D. C. Goodale, having harvested from a field of twenty-three acres a fair crop of spring sown Odessa wheat, carefully turned under the stubble, and excepting about three-fourths of an acre, for which he lacked seed, sowed the field with the Harmon wheat, as it is called with us. The seed was genuine, the Doctor having procured it from General Harmon the season before, and taken much pains to keep it pure. At harvest the part not sown was a fair growth of Black Sea wheat, somewhat uneven, as might be expected, but yielding an average of fifteen bushels to the acre. That part sown with the Harmon wheat, is about two-thirds of that variety, the remaining third was Black Sea produced from the scatterings of the first harvest.

The last I will now notice, was a small lot of an acre and a half on the farm of Ira Strong, which was of spontaneous growth, or sprung from the droppings in gathering the previous crop. The land not having been plowed, or in any way cultivated, the grain stood thin, with long heads, remarkably well filled, the straw hard and stiff, compared with the spring sown.

The foregoing, I think establishes the point that the Black Sea wheat may be successfully cultivated as a winter variety, and that it is thus improved in weight of grain and quality of flour; and farther, that the straw being more solid, it is not as liable to lodge.

J. W. Strong.

CURING PROVISIONS.

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A **writer** with the signature **Zea**, gives some directions in the Montreal *Witness* in regard to curing provisions for the English market, which may be both useful and interesting. He is in favor of *dry salting*, as it is called, that is rubbing the meat with salt, instead of putting it into brine. This mode, he thinks of great importance; for he observes, "it takes away the blood, cures the meat, condenses it, coagulates the albumen, and renders it not so liable either to spoil or to become salt. Hams and bacon, it is well known, cured with dry salt, can be kept perfectly well, though not one quarter as salt as those prepared in the brine tub, indeed scarcely to to be considered as salt food at all."

The quality of salt he deems of the next consequence. The salt made in "the States," he thinks, is too often impure, though he says the manufacturer might refine it so as to be as good as any other.

Cleanliness is another point which he considers as deserving much attention. He says, "washing the meat in water before finally packing it up for sale, should never be neglected; and care should also be taken to avoid all kinds of dirt. The people of Britain, correctly enough, are very particular in this respect; they like to see the color of meat, and so, partially, to be able to judge of its quality."

Beef, he says, should be cut into six pound pieces, and pork into four pound pieces, the former to be packed in tierces of 300 pounds, the latter in barrels of 200 pounds, each containing fifty pieces. "The reason for this," it is said, "is that beef being generally served out to men at sea in greater quantities than pork, it is more convenient to have it in larger pieces, without weighing; pieces of those sizes are also more perfectly cured through than larger pieces, and when of a uniform size they pack better. The pieces of beef being larger than those of pork, it is obviously better that larger casks be employed to hold them more conveniently. Even when intended for domestic use, uniformly sized pieces are more convenient than those of various dimensions, requiring to be cut before being used, the piece left being thrown back often carelessly into the cask, and liable to get rusty in consequence."

He is not in favor of the use of saltpetre. Its only value, he thinks, is to give color to the meat. The points most deserving attention, he sums up as follows:

"*First,* The pieces must consist of, for beef, six pound pieces, and pork, four pound pieces.

"*Second,* The salt must be good, and but very little saltpetre must be employed.

"*Third,* The meat must be dry rubbed for three or four days, at least once a day, to extract a certain quantity of water, and to chemically alter the meat.

"*Fourth,* The meat must be put into pickle, so as to cure it sufficiently; in this it should remain ten days, or until it is required to be packed.

"*Fifth,* It must be well washed in water, if necessary scraped or cut.

"*Sixth,* Packed away, if beef, in tierces; if pork, in barrels, with good coarse salt; the packages filled up with clean pickle.

"For dried or smoked meats, the dry salting alone should be employed; they will be found of a perfectly distinct flavor from those cured alone in pickle; and although slightly salted, keeping far better than provisions so highly salted by the wet process, as to be scarcely eatable.

"The use of sugar or molasses is daily gaining favor among packers; as preserving meat in a superior manner, having a finer flavor, keeping better, and never becoming rusty; and however old, never excessively salt. It has also been asserted on high medical authority, that the use of sugar in curing meat, would prevent that fearful disease sea scurvy. It has been used in curing hams for a long period, indeed a good flavored ham cannot be prepared without it; but it is of the greatest importance in curing beef, which is to be kept for a length of time, or which is required of a fine flavor.

It is used in the first process, along with the salt, for dried provisions—say one pound sugar, or one pint molasses to four pounds salt. With pickled meats, it is used in the last process along with salt, to pack up the meat in the cask, say about half of each, sugar and salt.

"As regards the kinds of beef to be packed; the best description consists of prime mess, the pieces rejected from mess causing too great a loss to the packer. The coarse pieces of the leg, which are rejected from prime mess, can be boned, dry salted, and dried; in which way they yield as good a return as the rest.

"Owing to the great local demand, the most desirable description of pork consists of mess: the rib pieces of hogs weighing over two hundred pounds should be so packed: The hams and cheeks, as also the fore part, consisting of the neck and shoulder in a piece, should be cured and dried; the fashion of removing the bones from the latter is worthy of adoption, as when the bone is left the meat is much more apt to spoil, besides being an awkward joint. Prepared this way, the pieces rejected fetch as good a price as the rest. When the pig is too small for mess, but large enough for prime, the latter should be made, reserving the hams and cheeks; if too heavy for prime, remove some of the rib pieces to add to the mess; prime mess neither suiting the British nor Canadian markets; whereas prime suits the British and West India demand better than even mess."

It is known that provisions are sometimes preserved by being packed in air-tight vessels. In relation to this process, the writer from which we quote observes:

"Provisions are preserved in many places without salt, by putting them together with water into metal cases, putting the cases into water to boil, converting the water in the case into steam, thus expelling the air, the metal case is then soldered down. Provisions thus put up keep unaltered for any length of time.

"The only objection is the expense, they having generally been prepared at places where provisions are costly, and put up in small packages. By packing where provisions are cheaper, and using large canisters, I do not see any reason why they should cost more than if prepared with salt.

"But it has often occurred to me, that the preserving of animal food might be simplified by filling up the packages with melted fat in lieu of water; that of the animal to be packed, being preferably employed, in which case wooden casks might be used, and boiling would not be necessary. The meat should be free from large bones, and immersed in hot fat long enough to expel the air, then put in a cask previously saturated, the fat poured on as filled.

"For sea use or export to the West Indies, this article would be invaluable, and would be cheaper than the usual mode of curing in inland places, where salt is expensive, as all the material required would be on the spot, the fat selling as well with the meat, as if, as usual, rendered into tallow, and for culinary purposes could be easily removed, either by exposure to the fire, or immersion in boiling water."

"In the Liverpool Times, I find the following paragraph, under the head of 'New Import from America:

"'Some barrels of fresh pork have arrived at this port from America. It is preserved fresh and wholesome, by filling up each barrel with melted lard.'

"I may add, that I have since learned that many Canadian farmers keep fresh sausages all summer in the same manner."

FARMING AMONG THE HILLS.

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From the large number of subscribers we have in New-Lebanon and vicinity, we were prepared to expect a good degree of attention to agricultural improvement, and in this respect we were not disappointed. Our trip was made with so much haste, that we were unable to visit as many people as we would have called on; though we probably formed a tolerably correct idea of the condition of the land, and the system of farming pursued, by passing through the neighborhood; and we are free to say, that neater and better cultivated farms than we saw here, are seldom to be met with in any part of the country. We intend no invidiousness in making particular mention of the farms of Messrs. Jabez Pierce, John Murdock, Peter and Reuben Barker, and Elijah Bagg, (all of New-Lebanon,) and Roswell G. Pierce and the Messrs. Gardener of Stephentown.

Fruits.—Apples, pears and plums do well on many of the slaty hills of this region. Some years since many of the farmers, by attention to their orchards, especially to the production of winter apples, laid up money, but their children seem to have fallen into an error in continuing the old orchards, in many cases without giving them much attention, instead of setting out and cultivating young trees. The consequence is that less apples are now produced, and of poorer quality than formerly, and the farms are too often cumbered by old scraggy trees of no value. Pears appear to do well here; nearly all the trees we saw, were very heavily loaded with fruit. The same want of young trees was noticed, however, as has been spoken of in regard to apples. But as a taste for horticultural improvements is evidently increasing, we trust this defect will ere long be remedied. Mr. R. G. Pierce of Stephentown is forming a nursery of various kinds of fruit trees, and in the course of a year or two, we have no doubt he will be able to supply such as are wanted.

Under-draining.—We saw a few instances where this operation had been practised with excellent success; and we will remark, that in our opinion, greater advantage would result from a general adoption of the plan of under-draining, in this section, than almost any other mode of improvement. The land on the mountain slopes is natural to grass, when not too wet; its natural declivity is favorable to draining, and it is only necessary to take the surplus water from the surface, to make the most productive meadows. In other situations, where the soil is sufficiently exposed to the warming influence of the sun, the practice of this system will render the soil capable of yielding bountiful crops of almost every kind. We witnessed this on the farm of Mr. Bagg of New-Lebanon, and on that of Mr. Pierce of Stephentown. Will not these examples stimulate others to profit by the same practice?

Fences.—Stone walls, and what is called "half-wall," are quite common. The latter is a fence with two or three boards or rails attached to posts, so as to form the top of the fence, with stone underpinning or base. From the abundance of stone which can readily be obtained on most farms, either in loose boulders or by quarrying from the beds of rock, walls are nearly as cheap in their first cost as any kind of fence, and when properly made are no doubt the best in the long run. We noticed that Mr. R. G Pierce had commenced enclosing his farm with capital walls. He has already several hundred rods laid apparently in the most permanent manner, giving to the farm an air of neatness, by their regular angles and straight lines, which is particularly agreeable to the eye. It is sometimes objected that walls do not form a good fence against sheep; the jagged and rough sides permitting them to climb readily to the top; but Mr. Pierce assures us that where attention is paid to lay the sides as even and true as may readily be done, sheep will not attempt to scale the sides, and the walls form a perfectly safe fence against them.

Bees.—Considerable numbers of bees are kept in this section. The most successful cultivator of this description of stock which we met with, was Mr. Nathan Howard of Stephentown. He has long studied the habits of these insects with close observation, and has no doubt obtained a very correct knowledge of their economy. He has a house of somewhat peculiar construction in which his bees are kept. It is so contrived that it may be readily closed, the light totally excluded, and yet be ventilated. The walls are double, and when it is closed, the bees are not much affected by changes in the temperature of the weather, so that they remain in a quiet or half dormant state, requiring comparatively but little food throughout the winter season. In summer it is opened, but the rays of the sun do not strike the hives. It appears to us altogether the best plan for wintering bees that we have ever seen. But we have not attempted a particular description of the house or Mr. H.'s mode of management, as we expect some details on these points from him.

New-Lebanon Springs.—We made a short call at these springs, which seem to become every year more popular. We believe the number of visitors at the several hotels, including the patients at the Hydropathic Institution here, has averaged nearly 300 for a considerable portion of the present season. A considerable market is thus afforded for the fruits, vegetables, &c produced in the neighborhood. By the politeness of Mr. Hall, the proprietor of the Columbian Hotel, we took a look at the baths, the fountain, &c. The water is the most perfectly pure and limpid that can be imagined. It issues from the rock at the rate of from twelve to fifteen barrels per minute, and of a temperature of about 72 degrees. A bottle of this water, which we took from the fountain, is now undergoing a chemical examination by Prof. Emmons of this city. The results of this investigation may show to what principle the beneficial effects of bathing in this water are specially attributable.

VISIT TO THE SHAKERS.

The present settlement of Shakers, or United Brethren, at New-Lebanon, was the first spot on which this sect ever located. They commenced here about forty years ago. The society consists at present of about 600 persons. more than half of which are females. From small beginnings, they have acquired large possessions, holding at this time not less than seven thousand acres of land, mostly lying contiguously. We spent a few hours examining various objects connected with this community.

Their buildings are all built in the most substantial manner, and are constructed with particular regard to convenience. One of their barns is, considered in all respects, the best contrived and most perfect of any we have seen. It is one hundred and forty-one feet long, fifty feet wide, and twenty-five feet high in the walls. It consists of three stories. The basement is devoted to the stock and the storage of vegetables in winter; the second and third to hay and grain. The main entrance for produce is in the third story, which, from the barn being on the side of a hill, is nearly level with the ground. A floor runs lengthwise through the barn, on this story, and the hay and other articles are pitched downward into the bays on each side. The barn is capable of containing two hundred tons of hay, and it is so disposed that scarcely any of it has to be raised higher than the wagon from which it is thrown. Only two hands are necessary to unload—one to pitch off, and one to keep the mow level, thus saving a great amount of labor compared with what is required in barns of common construction.

The apartments for the cattle are complete. The walls which are of very solid stone-work, are plastered, and though cool in summer, we should suppose they would be so warm in winter that no frost would be found there; windows in each side permit free ventilation. The fodder is thrown into racks for the stock, from the "feeding floor" in the second story. In front of the racks are mangers to catch any straws that drop from the racks, as the fodder is pulled out by the animals. An open space is left between the racks and mangers, which allows the animals ready access to fresh air, prevents the hay in the racks from being made unpalatable by their breath, and gives room also to slip in boxes when it is wished to feed with slops or roots. The man who had charge of the stock, said he could feed and take care of a hundred animals in this barn with less labor than he could manage twenty in any other barn he ever saw. The cattle stand on a platform with a gentle slope, which renders it easier to keep them clean and dry. The cows are tied by chains around the neck, and are always milked in their stalls summer and winter. They are milked exactly at fixed times. So punctual are the attendants to this, that a clock is kept in the apartment, and the herdsman told us at what moment the cows would be in their places.

The barnyard is so contrived that none of the manure is wasted. It is kept littered with straw and such waste matters as can be procured, and the manure from the stalls is made into compost with that in the yard, mixed with muck, and is not used till it has become fine by decomposition.

Neat Stock.—The cattle kept here are nearly all crossed with Short-Horn blood, and some are purely of this variety. Some years since a bull and three cows were procured by this community from their brethren near Lebanon, Ohio. They were of the Short-Horn stock imported into Kentucky by Lewis Sanders and others, commonly known as the importation of 1817. The descendants of the animals procured from Ohio are still kept. About twenty years ago, the society hired for one season Gorham Parsons' imported bull Fortunatus or Holderness.* This bull was no doubt of the same breed as the animals of the Kentucky importation of 1817, they having been all procured from the same section, the banks of the Tees in England. The two branches of this stock, that derived from Kentucky and the bull Holderness, have here been bred together, and the stock thus produced exhibits quite an uniform character. They are generally large, tolerably well shaped animals, but rather heavy in bone, and somewhat coarse-fleshed. Some of them have the appearance of great milkers. We were told that the progeny of Holderness were generally superior for the dairy. We believe this to have been true of his stock generally, and he was used for a long time and in many neighborhoods, in different parts of Massachusetts, Connecticut, and finally in Western New-York. The society here have many of the second generation, which show strongly the characteristics of the old bull, and it is only a year or two since they sent a cow to Virginia, which was one of his immediate offspring. Several members stated that Holderness was of more value to them than any other bull they had ever used, and that they would gladly give a large price for another of the same stock or similar character. Some crosses with the Ayrshire breed have lately been introduced. They are considerably smaller than the other stock, but it does not yet appear that they have any particular superiority for any purpose. A longer trial may, however, more fully develope their qualities, and induce a more favorable opinion of them. The cattle are all in fine order and show that they are properly cared for.

Dairying.—The manufacture of butter and cheese is only carried on to the extent demanded by home consumption. Cheese was formerly produced for sale, and of such quality, that it commanded (when old) from twenty to twenty-five cents per pound. The same system of manufacture is still pursued. The different dairy apartments were shown to us, and all information in regard to the various processes and management cheerfully given. The buildings appropriated to this branch of business are rather small. They were erected soon after the commencement of the society, and are less convenient than most of their modern structures are; it is, therefore, designed to supply their place by a new edifice, to be constructed on the most approved plan. The several rooms for milk, butter and cheese, are kept with most scrupulous neatness. Not a fly or any other insect, nor even the least *speck* of dirt could be here discovered. The cheese-room was cool and airy; the windows of which were protected by gauze screens, and the temperature kept low by wetting the floor with cold water. After the cheese is properly cured in this room, and before the weather has become so cold as to make it liable to freeze, it is removed to a room in the cellar or basement of the house. Here the temperature is nearly the same, about 45 degrees at all times. It is kept here for any length of time, and improves with age.

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* For a history of this animal, see Cultivator, for 1845, p. 349.

Economical Arrangement.—The cellar just mentioned, (which, by the way, is so cold that no ice-house is ever needed,) belongs to the house of the principal or senior family. On signifying our wish to see the arrangements for culinary purposes, two of the females at once accompanied us to the kitchen, and kindly showed us the admirable fixtures, and explained their various uses. It would be useless to attempt a minute description of all the labor-saving contrivances which are here secured. We have examined similar departments belonging to various large establishments, but have never seen such perfect conveniences as there are here, and we knew not which most to admire, the skill and ingenuity evinced in the original design, or the neatness displayed in their use. A view of this beautifully clean kitchen, and the systematic and quiet manner in which operations are here conducted, is a sight worth seeing. The cooking for a family of some 300 persons is here done with less labor than is usually required for thirty.

Sales.—A large portion of the sales of the society consist of dried herbs, extracts, and the seeds of vegetables. Some fifty to sixty acres of land are devoted to the production of these articles. The amount of sales, or the nett profits of the business we did not learn. The cultivation of their herb and vegetable gardens, as well as their fields generally, is very neat. The herbs and other preparations are put up in the best manner, and are sold by established agents in the large cities, and also by travelling agents over a large portion of the country. We noticed a press used for pressing herbs, which appears to possess some important improvements. It was invented by a young man belonging to the society, and we believe he has secured a patent for it. We hope he will furnish drawings and a description of it for insertion in our columns.

We are well aware that many of the improvements of which we have spoken, cannot be so readily or advantageously carried out on common farms or individual estates, and we do not bring them forward as deserving universal adoption; but we do think that *something* of the system, which is here observed in conducting business, might be profitably imitated by many of our farmers. Above all we do not hesitate to recommend, both to husbandmen and housewives, the shakers' examples of neatness and cleanliness, the imitation of which we are sure would result in the increase of comfort and happiness.

Wild Geese.—On the premises occupied by one of the families of Shakers, we saw the largest flock of these birds we have ever seen in a domestic state.[*] There were about forty in number, all of which and about as many more, which have been sold, sprung from one pair procured about twenty years ago. The man who has charge of them, **Daniel Hawkins**, gave us some facts in regard to their habits which were new to us, and may be worthy of note. It is known that wild geese do not breed till three years old; but friend **Hawkins** states that they always mate in the fall, preceding the spring when they are to breed. He states that the new pair selects the site for its future nest in the fall soon after mating, and that they carefully guard it ever afterwards till the young brood is brought off. The ganders appear to be strict *monogamists*, choosing but one female, and adhering to her with the strictest fidelity till death or force separates them. This seems to be their natural state, but we cannot say that the male would not unite with more than one female, where the number of the latter was greater than the former.

This family of geese furnish an example of "in-and-in" breeding. In discussing this subject in a former article, we stated that aboriginal or pure races of animals were not known to degenerate from this course of breeding. Friend H. informed us that the original pair of geese from which these have descended, belonged to one brood; they were therefore, of precisely the same blood, and their offspring to this time, have been produced by the strictest in-and-in breeding. But have they degenerated? is the question. Not in the least degree, so far as can be discovered. They breed as well as they ever did, and the young are as large, as hardy and as perfect as the old stock were.

These geese, besides being a curiosity and an ornament to a place, are thought to be quite as profitable as any. It is said they have more and better feathers; they are heavier and more hardy. Friend **Hawkins** informs us that the female lays from three to five eggs the first breeding season, or the spring they are three years old, and after that an average of about seven. All the eggs generally hatch, and the young are almost sure to grow up. Their growth is surprisingly rapid, reaching nearly their full weight, as friend H. states, in about eight weeks. This quickness of growth admits of their being reared, in their wild state, within the short summers of the polar regions. During incubation, the gander watches the nest night and day, and will peril his life in defending it against all intruders. He manifests as much affection for the young as the mother, and is even more assiduous in providing for them. He always endeavors to induce as many of the young as possible to place themselves under his care. In this way the strongest ganders often get away the young belonging to others. The first gander of this flock was kept over twenty years, and he always acted in the capacity of a patriarch to all his posterity—none in the flock refused to yield to his authority, and he availed himself of what he appeared to think was his right, in taking charge each season of several broods of young.

SCIENTIFIC FACTS.

* * * * * *

Nitrogen.—Wheat exhausts soils, because it derives therefrom the large quantity of nitrogen which the grain contains; but it is this same quantity of nitrogen which renders it more valuable than other grains. Tobacco exhausts powerfully the soil, because it requires an abundance of nitrogen to form its nicotine; but on this principle its value in market depends. To produce indigo, nitrogen must be supplied to the plant by an abundance of rich manure; no crop is more exhausting; but without the nitrogen no coloring matter could be formed. The value is in proportion to the cost; and the success of the cultivator depends on the skill with which he turns the nitrogen of waste and valueless substances into those of high price in market.

Blood.—Blood examined under a microscope, is found to consist of minute red particles, floating in a nearly colorless liquor. These red particles, in human blood, are from one four-thousandth to one eight-thousandth of an inch in diameter. In most other animals they are larger.

Preserving Animal Substances.—Putrefaction requires the presence of water; hence, by drying animal substances, they are preserved. Hence one reason of the preserving power of salt, from its strong affinity for the water contained in these substances. Alcohol operates partly in the same way. Various other substances act by entering into combination, and the divellent tendencies of the affinities of the constituents of those substances are overcome; among these are corrosive sublimate, copperas, tannin, wood vinegar, and kreosote. A high temperature stops putrefaction by coagulating the azotized materials. Putrefaction is impossible above 182° or below 32°. Freezing acts precisely as drying. Hence bodies preserved by frost, and those which remain fresh for years after death on the Arabian deserts, are preserved from the same essential cause.

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[*] We noticed also a fine flock of these geese on the farm of **Samuel Perry** of New-Lebanon.

Amber, according to scientific authority, is the turpentine of unknown trees belonging to a former geological epoch.

Butter.—This substance is a mixture of six different fats, viz., common stearine, margarine, and oleïne, with butyrine, caproïne, and caprine. Keeping butter after melted, at a temperature of 68° for some days, the stearine and margarine crystallize, while the other remains liquid. Oleïne is separated by solution in alcohol; the others by successive solutions in the same, as they possess different degrees of solubility, but have not been obtained pure.

Coloring Matter of Plants.—The green color of plants is due to the presence of a substance termed *Chlorophyll*. But so excessive is its coloring power, that even very deeply colored plants contain very little of it; and Berzelius calculated that the entire mass of leaves of a large tree seldom contains ten grains of this substance. Its composition has not been fully ascertained, though it contains no nitrogen. The coloring matter of flowers, from its very minute quantity, it is almost impossible to examine.

Kreosote.—This is the antiseptic principle in pyroligneous acid, and in the smoke of burning vegetable substances. Its most remarkable property is, that it coagulates albumen and the coloring matter of the blood, and these bodies are then no longer susceptible of putrefaction. Fibrine, or muscular flesh, immersed in a solution of kreosote for some minutes, has no tendency to putrefy even if exposed to the heat of the sun. Kreosote has a similar action on vegetable substances; hence fence posts, immersed in pyroligneous acid, are rendered very durable.

Cocoa-tallow.—The albumen of the cocoa nut contains a solid fat, which is extracted from it, and used in the manufacture of candles. It is a mixture of ordinary oleine with a stearine, which contains a peculiar acid, called cocoa-stearic acid.

Nutritive value of Food.—Boussingault has shown by experiments, that in herbivorous animals, the total quantity of nitrogen assimilated for the growth of its muscular and other tissues, is derived from, and equal to that contained in the vegetable substances used as food; and that hence, to ascertain the nutritive value of any organic substance, it is only requisite to determine the quantity of nitrogen it contains. A table is given in No. 12 of the last volume of the Cultivator, exhibiting the agreement of theoretical results thus derived, with those of many experiments directed by enlightened agriculturists.

Source of Nitrogen.—Plants vary exceedingly in the facility with which they derive nitrogen from the air, whether by direct absorption of the gas or as ammonia. Thus some species of *Trifolium*, or trefoil or clover, thrive nearly as well when placed in pure sand, and supplied with air and water only, as when sown in ordinary soil; but on the contrary, wheat grows but slowly under the same circumstances, and makes no attempt to flower; and on analysis, the whole plant is found to contain even less nitrogen in actual quantity than had originally existed in the seed. Wheat, therefore, has no power to absorb nitrogen from the air, while trefoil possesses that character in probably its greatest vigor. But fully grown wheat is rich in nitrogen; its seeds contain more gluten (which consists in part of nitrogen) than that of any other grain. Wheat derives its nitrogen from the soil; clover, trefoil and peas, mainly from the air. Hence, a crop of wheat containing a hundred pounds of nitrogen, exhausts the soil much more than a crop of clover containing a hundred pounds of nitrogen. Hence also the eminent utility of clover as a green crop to precede wheat; it draws wealth from the air, and reduces it to a shape in which wheat can use it.

Nitrogen in a crop of Hay.—Hay contains usually about 1⅓ per cent of nitrogen, or a ton contains 30 pounds. A good meadow, therefore, yields about 60 pounds of nitrogen per acre per annum.

Animal heat.—The source of animal heat has greatly puzzled philosophers. It appears to result mainly from the conversion of carbon into carbonic acid, by the union with oxygen in respiration, on the same principle that heat is developed in slow combustion. This is proved by the fact, that the temperature is highest in red-blooded animals, and in the same animal at those periods when the circulation is most rapid and the quantity of air consumed the greatest, as in running or hard exercise. Only eight-tenths of the animal heat can be accounted for in this way; that is, the combustion of a given quantity of carbon is found to produce only eight-tenths of the heat of the body, during the consumption of that quantity in respiration. The rest must therefore be attributed to some action of the system itself.

Gastric Juice.—The singular solvent energies of gastric juice has led to much inquiry as to its composition. It is specially characterized by a mixture of a quantity of free muriatic acid, with some salts But if we form artificial gastric juice, by mixing together the muriatic acid and the salts in the proper proportions, it is found totally incapable of dissolving the materials of food, as in digestion. The organic material of the gastric juice, though in very small quantity in any case, is wanting; but all the solvent powers of the natural juice may be at once conferred upon the artificial, by the addition of a very small quantity of the mucus of the stomach.

Perspiration of Plants.—Dr. Hales planted a sunflower 3½ feet high in a garden pot, which he covered with thin milled lead, cementing all the joints so that no vapor could escape, except through the sides of the pot and through the plant itself; but providing an aperture, capable of being stopped, through which the earth in the pot could be watered. He found, in fifteen days, after making all necessary allowances for waste, that this plant, 3½ feet high, and with a surface of 5616 square inches above ground, had perspired in twelve hours of a dry warm day, 30 ounces; on another day less dry, 20 ounces; on a dry warm night, without dew, 3 ounces; and on a night with some dew, nothing. When there was rain or copious dew, the plant absorbed two or three ounces.

Force of Sap.—Braddick, a British physiologist, cut off the stem of a grape, five years old, and covered the wound with a piece of bladder, secured by cement and twine. The bladder, although at first drawn very close to the top of the shoot, soon began to stretch, and to rise like a ball over the wound, and feeling as hard as a cricket ball. In about 48 hours afterwards the force of the sap burst the bladder.

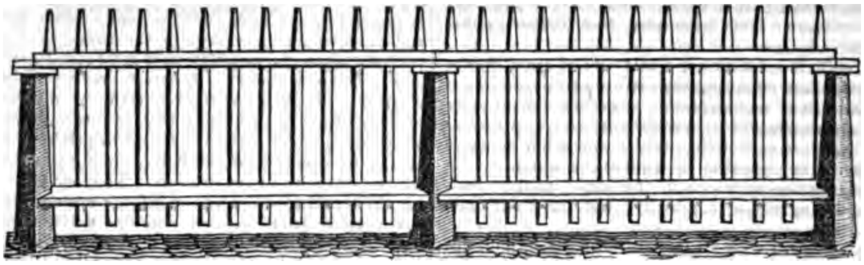
Century Plant.—The American Aloe, or *Agave americana*, is popularly supposed to flower only when a hundred years old, whence its name. But if subjected to the best treatment, it will flower in thirty years; on the other hand if badly managed, it will *not* flower in a hundred years.

Difference in temperature for Plants.—Some tropical plants do not flourish and perfect their fruit in temperate climates, even if kept in the warmest hot-houses the year through. On the other hand, Von Baer found *Ranunculus nivalis* and *Oxyria reniformis* flowering in Nova Zembla, where the soil was not warmed above 34½ degrees; and in Jakutsk, Erdman states that summer wheat, rye, cabbages, turneps, radishes and potatoes, are cultivated, although the ground is not thawed in summer more than three feet in depth.

Frost in Valleys.—Professor Daniel states, that he has seen a difference of 30°, on the same night, between two thermometers, placed, one in a valley, and the other on a gentle eminence, in favor of the latter.

Advantage of Garden Irrigation.—Professor Lindley says, that mildew, often produced by dry air acting upon a delicate surface of vegetable tissue, is completely prevented in annuals by very abundant waterings. The ravages of the *Botrytis effusa*, which attacks spinach; of *Acrosporium monilioides*, on the onion; and the mildew of the pea, caused by the ravages of *Erisyphe communis*, all minute parasitic plants, may all be stopped or prevented by abundant watering in dry weather.

Rice Paper is not prepared from the rice grain, but is the production of the *solah*, an aquatic plant which grows profusely in all the marshes of China.



STEVENS' PATENT FENCE.—Fig. 84.

Joseph Stevens, of Northumberland, Saratoga Co., N. Y., has lately obtained a patent for an improvement in fences. The manner of making this fence is described as follows:

The posts are made of the same composition as common brick, being burnt or baked to the consistency of a hard, arch brick. They are set in the ground diagonally or cornerwise; a tenon is made on the top of each post, on which is placed a coupling block for the top rail to rest upon, and fastened to it by a pin or nail, which unites the whole fence firmly together; the bottom rail is notched at each end, so as to embrace the posts firmly, and is supported by the paling or pickets. It will be seen that in this mode of construction, there are no tenons in the rails, thus preventing rot or decay in the wood part.

This fence has been erected on the premises of Mr. Finney, of Northumberland, and it is said to be highly approved by him and all others who have seen it.

In no department of husbandry is improvement more needed than in fences. The above mode appears to possess the advantages of durability and ornament. The inventor believes, also, that this fence can be constructed as cheap as the ordinary kind, and this fact taken in connection with its acknowledged durability, must be a strong recommendation.

EXCITEMENTS—BERKSHIRE HOGS, &C.

A few years ago, the Berkshire breed of hogs was pretty generally disseminated through the country. Quite an excitement was got up in relation to them, and for a time it seemed almost impossbile to obtain a sufficient number to supply the demand, although frequent importations were made from England. They were sold at such high prices that a few individuals made large profits by the breeding and sale of them. From twenty-five to fifty dollars for pigs of three months old, and from one hundred to two hundred, and in some instances even three hundred dollars each, for grown hogs, were obtained. It was easy to see that the profits of raising hogs for pork, however good might be the breed, would never justify such prices. But there was a diversity of opinion as to the real merits of the Berkshires compared with other breeds. For a time, however, the tide continued to set strongly in favor of the Berkshires, and either for the purpose of participating in the speculation, or with a view of giving them a fair trial, they became extensively adopted.

The writer of this article, was one who believed that the Berkshires, in their "palmiest days," were overrated, when compared with several good breeds. At the same time it is proper to state that he believes they are now in many cases, estimated as much too low as they formerly were too high. It must be admitted that their reputation has greatly fallen, if, indeed, it is not now entirely the reverse of what it was five or six years ago. But the change of public opinion in this instance, is only another evidence that excitements are followed by re-actions, and that in the two extremes of opinion, truth is seldom found. It is not always easy to induce people to judge a thing by its own intrinsic merits; there is frequently a tendency to exaggeration; some are disposed to place an undue value on a favorite object, while others, disgusted or provoked, as it were, by the enthusiasm or infatuation of their neighbors, run directly into the opposite extreme, and refuse to concede merit where it is really deserved.

A striking instance of the false estimate of an article, in two respects, was furnished a few years ago, in the somewhat famous "Chinese Tree Corn." This corn was first described as having a peculiar habit—"growing like a tree," and "producing its ears on the ends of the branches." It was withal represented as an "uncommonly early" corn. It was sold at twenty-five cents an ear over the whole country. The people generally were disappointed in regard to it. At the north, it was found a *late ripening* kind, compared with the kinds commonly cultivated, and it was not, therefore, adapted to this region; while its habit of growth was every where different from what was expected from the description first given. In consequence of this the article was pronounced a "humbug," and condemned—not in all cases because it was unworthy of cultivation, but because it was thought not to correspond with the representation which had been given of it. It was not, it is true, adapted to those sections where a *very* early kind must be grown; but as far south as forty degrees, it is known to have succeeded well. On soils of medium quality, it would out-yield most varieties. It also made the best and sweetest meal; and the crop would turn out the greatest quantity of fodder, and of the best quality, (owing to its abundance of soft leaves,) of any corn known. All this can be verified by the testimony of persons who, like the writer, have given this corn several years' trial.

Now the point we wish to make appear, is, that exaggerated statements of the value of an article, tend ultimately to an undue reduction of its value. We could cite other instances in proof of this. The Merino sheep, from having been sold soon after their introduction to this country, for from one thousand to fifteen hundred dollars per head, during the reaction which followed, fell down in price to less than *two* dollars per head; though such was the prejudice against them, that few buyers were found at that. It required many years—after the days of speculation were over, and fortunes had been made and sunk—for the equilibrium to be restored, and a true standard of value established for these useful animals.

And has not the value of the Berkshire hogs been unjustly depreciated from causes similar to those abovenamed? We admit there are breeds which are equal and in some respects preferable to the Berkshires—and this, in fact, has always been our opinion—but at the same time, the Berkshires are far superior to a large portion of the hogs which have been, and still are kept in various portions of the country.

The objections which we have heard against this breed of hogs may be thus enumerated. 1. Their color is black. This we believe is the most common objection in this section. 2. They are too small. 3. They have too much lean in proportion to the fat. 4. Their flesh is coarse grained.

As to color, we do not see why black is not equally as objectionable as any *other* color, and we cannot discover any *reason* for its being more so. It is all a matter of fancy whether we choose black, white, or *green*.

As to size, from the origin of the present breed of

Berkshires, it results that some would be too small for certain purposes. They have been derived by various crosses of the Siamese and other small Asiatic varieties, with the old English Berkshire. From this mixed origin, it follows that the stock run larger or smaller in proportion as they have more or less of the blood of the small or large breeds from which they sprung: or they will vary in size according to the designs and skill of the breeder. But want of size cannot certainly, be applied to all the Berkshires bred in the country. Numerous cases could be given where they have weighed from five to seven hundred pounds, dressed. We know of specimens of the breed now, which, if fatted, would weigh that, and if this is not size enough, we don't know what would be had. But we may here mention, that when carried to the south and south-west, the stock seems to have, from the nature of the climate, a tendency to degenerate in size and constitution.

As to the objection that they have too much lean in proportion to the fat—we believe the breed in general is inclined to make flesh rather than fat; the Berkshire, in all his variations, seems to be characteristically a *lean-meated* hog, compared with most breeds; his carcase may be said to be made up as the Paddy wished his pig to be, "with a strake o' fat and a strake o' lean." This quality may be *really* objectionable to the packers, who wish to get from a hog the greatest possible amount of "clear" pork; but it is not always a fault. For eating fresh or making bacon, it is far more palatable than that which is clear fat.

But this tendency to lean in the Berkshire hog is not without its advantages in other respects. It assists the constitutional hardiness of the animal, and gives him a muscular vigor which enables him to protect himself, or, as the expression is, to "cut his own fodder." These qualities have proved in many cases of great advantage in crossing the Berkshire with other breeds; particularly in giving "form and comeliness," and constitution, to the pot-bellied, blubbery stock, which were kept in some neighborhoods.

But the lean-making tendency should not be carried to an extreme, as it has been, for instance, in the "pumpkin buttocked" cattle, and as it may have been in *some* Berkshires.

The objection of coarseness of flesh, as stated in the last place, we think applicable to a portion of the Berkshires, but by no means to the whole. The large, pendent eared, coarse bristled class, which some persons have so much admired for their enormous size, we believe are obnoxious to the charge. At least we know that several we have seen dressed, were faulty in this respect, and we have frequently heard the same complaint in relation to others But we believe this objection is confined mostly to the big 6 and 700 lbs. hogs; and such we do not think profitable, or suitable to be recommended. They neither fatten as readily, or make as good meat, as those of medium size.

To sum up the matter, the very largest Berkshires, as just observed, are too coarse. Those which have the most of the Siamese blood, and such as, in breeders' phraseology, have been "bred too fine," have a tendency to barrenness, and are too small except for killing before they are six months old. The medium sized, soft haired, thin skinned kind, such as when fattened at a year and a half old, will weigh an average of 250 to 300 lbs., are easily kept, are thrifty and prolific, and make very good meat for eating fresh, or for ordinary family use.

The fact is, that the wants of the community, in relation to pork, can be best supplied by two descriptions or classes of hogs; one for supplying the market with meat for eating fresh, and for affording fine, delicate meat for families; the other for making heavy, fat pork for barrelling, &c. This is so well understood in England, that separate premiums are there given for the two classes, at nearly all the shows.

In our next we propose to make some farther remarks on this part of the subject, and shall speak more particularly of the breeds best adapted to the purposes here mentioned.

RURAL CONVENIENCES.

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We lately had an opportunity of visiting, on the same day, the farms of two very intelligent cultivators, both remarkable for the ingenuity and skill displayed in the arrangement of the out-buildings, and in labor-saving machines. A short account may be interesting, and perhaps useful to our readers.

One of these was the farm of Dr. Wm. D. Cook of Sodus, Wayne Co. N. Y., consisting of about two hundred acres of land. The buildings are a neat and substantial house, workshop, root-cellar, wagon sheds of large size, large carriage-house and horse-barn, corn-crib, and a barn 60 feet by fifty, with additions. The house has a fine cellar, with a hard and smooth water-lime floor. The sides of the cellar are plastered five feet high with water-lime, totally excluding rats and water, and rendering the drain, formerly in use, entirely unnecessary. The cellar contains an excellent hot-air furnace, which, with one fire, not consuming more wood than an ordinary fire-place, warms five rooms and a hall. There is an oven immediately over the stove of the furnace, which bakes well whenever the furnace is in operation.

The ruta-baga cellar is under the tool-house and workshop; it will hold upwards of fifteen hundred bushels, and is filled by dumping the cart through a hole above, provided for that purpose.

Attached to the barn is a building containing a fixed horse power. This building is thirty feet square, and contains an inclined tread wheel twenty-eight feet in diameter, which varies five feet from the plane of the horizon. The horses move it by their weight alone, and need no harness. It has been in operation five years, and in no part has given way, or yielded in the least. When disconnected with the threshing machine, it runs with the weight of a small boy. A *brake* stops it almost instantly in case of accident. With the building containing it and its appendages, it cost $300. The threshing machine has an admirable elevator attached, which raises the straw ten feet higher than the machine, and drops it at a convenient spot, saves the work of four men needed by the ordinary method, and is so constructed that it is totally impossible to throw out a single grain with the straw. It is on the principle of a row of *double rake heads* revolving together, and working all in the same direction.

A clover mill of Burrall's construction, (costing $55) is connected with the horse power, which cleans from five to six bushels of clover seed per day.

An excellent straw-cutter is also attached, and all the corn stalks are cut by horse power; and on being brined, the cattle eat them wholly. Nearly all the hay is chopped, and all the refuse hay left in mangers is thus converted into excellent food when mixed with grain or meal, and is all eaten.

A part of the barn cellar is occupied as cow-stables, and a part with a continuation downwards of the bay for hay and unthreshed grain. This bay is thus made so capacious, that it has at one time held thirty tons of hay, under three hundred bushels of grain in the straw.

The other farm visited was that of Joseph Watson of Clyde, N. Y.; a neat farm of 48 acres, lying on the Clyde river. It is well laid out in two lines of square lots, one on each side of a central lane. The out-buildings nearly enclose a barnyard, which during summer, is kept nearly as clean as a gravel walk. The buildings are of cheap construction, but very neat from cleanliness and internal arrangement. The barn contains a fixed horse power, by a rope running on the outward ends of radiating arms, the whole cost being only a few dollars. This drives a two-horse thrashing machine, a grindstone, a circular saw for cutting wood and for slitting pickets, a small mill for grinding horse feed, and a small grater-mill for making cider for vinegar, apple-sauce, &c. All these contrivances are good, neat and cheap, and therefore well adapted to the wants of the small farmer. Two horses being needed on the farm, much work is thus done by them when their labor is not otherwise needed, and no additional expense of hiring horses and men for large machines. There is a general exemplification throughout of the old rule, "A place for every thing, and every thing in its place." The proprietor does nearly all the work on this farm with his own hands; and after what has been said, he takes and reads an agricultural paper—the Cultivator.

MR. NORTON'S ANALYSIS OF OATS.

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MR. EDITOR—Having read with some attention the very excellent paper on the analysis of the oat, by which Mr. J. P. NORTON, (recently appointed to fill the new professorship of Agriculture, in Yale College,) won the prize of fifty sovereigns offered by the Highland Agricultural Society of Scotland, I was much struck with the confirmation which the various tables of constituents of the straw, the husk, and the grain of this plant gives to the well known fact that oats grown on stony ground are much superior to those grown on any other kind of soil. This analysis also confirms in some degree an opinion expressed in a former number of this volume, that food containing much oil was necessary for a good development of muscle, or that men and animals were able to do the most work when fed on aliment containing oily or fatty principles. In proof of this, Mr. NORTON has found in the grain of the several varieties of the oat which he experimented on, from 5.44 to 7.38 per cent. of oil, nearly equalling in this respect, the quantity contained in the most oleaginous of farinaceous grains, Indian corn, which, according to Boussingault, contains 7 per cent., and according to Liebig, (whom I do not repose confidence in relative to this grain,) only 5 per cent.

It is well known also that potatoes owe their value as food, whether for man or cattle, to the starch which they contain. Oats appear also to derive much of their value from the same source, the grain containing a little over three-fifths or 65 per cent. of starch. But it is the analysis of the inorganic part of the oat which is of the most consequence to the farmer should he wish to make use of science as an aid to agriculture. There are many sections of the country, where it has been as yet impossible for the farmer to grow as heavy a crop of oats on his good rich ground as he could on that which was poorer, owing chiefly to want of stamina in the straw to support the head when fairly loaded; heavy oats, when not grown on stony ground, generally *lodging* long before coming to maturity, thus rendering the crop light and of little value. This analysis shows how the defects arising from these causes may be partially remedied. For instance, the full grown plant is divided by Mr. N. into seven parts, viz., the grain, the husk, the chaff, the leaf, the top-straw, middle straw, and bottom straw, all yielding a different amount of ash, and the same kinds of oats growing on different soils varying from each other in this respect, thus proving that the soil exerts a most powerful influence on the whole body of the plant. The following table will show how well in this instance science agrees with popular opinion:—

	Grain.	Husk.	Chaff.	Leaf.	Top Straw.	Middle Straw.	Bottom Straw.
Sulphuric acid,	....	9 61	5.32	14.80	16.33	18.45	13.29
Phosphoric acid.	49.19	1.04					
Chloride of sodium,	0 35	0.24	5 11	2 29	3.13	3 03	15.36
Phosphates of lime, magnesia, and iron,	....	....	5.84	6.13	2.84	3.03	0 78
Potash, Soda,	31.56	10 26	7.96	11 89	19·09	21.80	43 17
Lime,	5.32	1.95	4.53	6 99	7.02	7 23	6.06
Magnesia,	8.69	0.38	1 84	2 55	2 84	2·91	2.07
Peroxide of iron.	0.88	1.58	0 24	....	0.30	1.40	0.61
Peroxide of manganese,	....	0.92					
Soluble silica,	0.89	4.46	11 99	5.90	5.13	7.34	5 03
Insoluble silica,	0.98	68.39	56 05	45 75	43.31	33.14	12 25
	97.86	98.83	98 90	99.30	99.99	98.33	98.35

In this, the silica, the element which enters largely into the formation of all kinds of stone, is shown to predominate in every case, with the exception of the grain and the bottom straw, in the former of which, the phosphoric acid and potash are predominant, in the latter the potash.

A curious fact is also noticed in the following table, and which is well worthy of attention, to wit:

	July 2.	July 9.	July 16.
Potash and Soda,	32.92	31.31	31.37
Chloride of Sodium,	10.37	8.10	0.61
Lime,	2.70	5.40	6 76
Magnesia,	3.44	4.52	2.94
Oxide of Iron,	0 39	0.21	0.35
Sulphuric Acid.	10.35	12.78	16.42
Phosphoric Acid,	14 02	20 09	15.19
Silica,	24.40	17.05	26 05
	98.59	99.46	99 69

that in the early period of the growth of the plants, chloride of sodium or common salt enters into its composition as one of its constituents in so large a proportion as one-tenth, while it nearly disappears at the time when the grain is about to form. From these facts put before us in relation to this plant in such plain and indisputable figures, it might be concluded that on those soft loamy soils, which contain little gritty matter, a heavy top-dressing of a compost made of the scrapings of streets of towns, a few bushels of lime and leached ashes together with a small proportion of salt, spread on and harrowed in at the time the oats are sown, would amply repay the expense and trouble of its application, and might perhaps enable some of the incredulous themselves to grow a few of those 80 or 120 bushel crops, that bear off the prizes from the State Agricultural Society every season. Do you not think so? J.

P. S. The prize offered by the Highland Society of Scotland, having drawn out such an able paper on the staple grain of that country, would it not be proper for the society of this state, which undoubtedly now has ample means, to offer at least as valuable a prize for the best paper on the analysis of Indian corn, inviting foreign as well as our own chemists to compete for it? There can be little doubt but an analysis of corn conducted in the same manner as that of Mr. Norton's on the oat, would develope some highly useful facts, which would have an economical bearing on the culture of one of our favorite crops, especially when it is considered that statements have been made, that more of that necessary of life, *sugar*, may be procured from an acre of corn, properly grown for that purpose, than from an acre of sugar cane!

THE following beautiful ode was composed for the annual celebration of the Berkshire (Mass.) Agricultural Society, in 1823, by WILLIAM C. BRYANT, Esq. It may be new to some of our readers.

......

Far back in the ages
  The plow with wreaths was crown'd,
The hands of kings and sages
  Entwin'd the chaplet round;
    'Till men of spoil
    Disdain'd the toil
  By which the world was nourish'd,
And blood and pillage were the soil
  In which their laurels flourish'd.
—Now the world her fault repairs,
  The guilt that stains her story;
And weeeps her crimes amid the cares
  That form'd her earliest glory.

The proud throne shall crumble,
  The diadem shall wane.
The tribes of earth shall humble
  The pride of those who reign;
    And war shall lay
    His pomp away;
  The fame that heroes cherish,
The glory earn'd in deadly fray,
  Shall fade, decay, and perish.
—Honor waits, o'er all the earth,
  Through endless generations,
The art that calls the harvests forth,
  And feeds the expectant nations.

THE HORTICULTURIST,

AND

JOURNAL OF RURAL ART AND RURAL TASTE.

……

Our readers are aware that the publication of a work with this title, under the editorial charge of A. J. Downing, Esq., was commenced by the publisher of the Cultivator in July last. Three numbers of the work have, therefore, been issued; and the number of subscribers it has already received, now about 2,000, is a satisfactory proof that it meets with the ready approbation of the community. Less than this indeed, was scarcely to have been expected, when we consider the popularity of the previous writings of the editor, particularly his works on "Landscape Gardening and Rural Architecture." and "Fruits and Fruit Trees of America." A taste for horticultural improvement is rapidly increasing in this country. This is obvious from the great increase of nurseries. A few years ago, it was feared by some, that competition in the raising and sale of trees would ruin the business; but the demand has actually outstripped production, and from present appearances is likely to continue in advance.

We propose to notice briefly some of the principal articles which have appeared in the publication above named.

The second article in the first number of the Horticulturist, is placed under the head of "Notes on a few Fruits of Superior Excellence." It is written by the Editor. He remarks that such has been the number of new fruits that have been lately introduced into our gardens, that it is not easy to decide which are the best. He observes that—"There is a large class of very fine fruits which have only a *local* value. They belong," he continues, "to a certain small district where they have originated, where their qualities attain their highest perfection, and beyond which they deteriorate." Among such he reckons the Newtown Pippin and Esopus Spitzenburg. These apples, so highly valued here, he states become so changed when transferred to other sections, that in New-England, and at the south and west, "they are scarcely the same fruits." The writer observes, however, that—"there is a small class of fruits which seem to have a capacity of adaptation that fits them for soils and exposures of almost every character. Hardy, uniformly productive and thriving in almost every tolerable soil, they become sources of profit to the orchardist, and of continual enjoyment to the possessor of small gardens." Among other fruits of this class, he reckons the *Imperial Ottoman Plum*, fig. 84, of which he gives the following description:

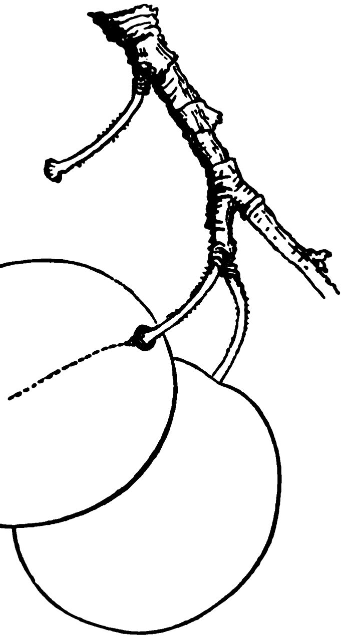

Fig. 84 —*The Imperial Ottoman Plum.*

"This valuable fruit is comparatively little known. It is named, but not described in the Catalogue of the London Horticultural Society. We believe it was imported from Europe many years ago by the late proprietor of the Linnæan Garden at Flushing.

"The Imperial Ottoman has qualities which will soon make it a very popular plum. In the first place, it is among the *earliest* sorts, ripening only two or three days after the Morocco. Secondly, it is *remarkably juicy*, sweet and excellent; the flesh of very melting texture. Thirdly, it is a most abundant and very regular bearer; the fruit hanging in the richest clusters. And lastly, it is a very hardy tree—suiting itself to almost any climate, where the plum will thrive.

"The Imperial Ottoman is a fruit of medium size, oval and regularly formed. The skin is of a pale, semi-pellucid greenish yellow, a good deal marbled. In general appearance, the fruit approaches, somewhat, the Imperial Gage, but the skin is thinner and more transparent. It hangs for some time upon the tree, and though borne in thick clusters, does not incline to rot like some of the finer plums. The stalk and leaves are rather downy, and the former is slightly inserted. The skin is covered with a delicate whitish bloom; and the flesh, when fully ripe, scarcely adheres to the stone."

Another fine plum mentioned in this article is the *Jefferson*, a variety produced and named by the late Judge Buel. The original tree which stood near his residence, we believe died during the last winter. We extract from Mr. Downing's "Fruit and Fruit Trees of America," the following description of this plum: "Branches slightly downy, leaves oval, flat. Fruit large, oval, slightly narrowed on one side towards the stalk. Skin golden yellow, with a beautiful purplish-red cheek, and covered with a thin white bloom. Stalk an inch long, pretty stout, very slightly inserted, suture indistinct. Flesh deep orange, (like that of an apricot,) parts freely and almost entirely from the stone, which is long and pointed; very rich, juicy, luscious, and high flavored. Ripens the last of August, and hangs a fortnight on the tree."

There is no doubt that this is one of the finest plums known. Mr. Downing observes, in the article in the Horticulturist to which we have referred, that "every year's trial confirms our high estimation of its merits. We perceive," he continues, "that it is now well tested in England, and equally admired there."

Another article in the first number which is particularly worthy of notice, is one on "The best five Winter Pears, by M. P. Wilder," Esq., President of the Massachusetts Horticultural Society. Perhaps no branch of horticulture has for several years yielded a better return in the shape of profits, than the production of winter pears in situations convenient to large markets. The production of this description of fruit might doubtless be increased to great advantage. We are acquainted with cultivators in Massachusetts who meet with a ready sale for considerable quantities of winter pears at five dollars, and in some instances as high as twelve dollar per barrel.

Mr. Wilder is an eminent and successful cultivator of pears, and in offering a list of those kinds to which he gives the preference, he has been guided by several years' experience. The first he mentions is the

1. *Beurre d'Aremburg*, a variety which for ten years, he says, has never failed to yield him an abundant crop. It keeps, he says, "as well as a Russet apple." He states that "it is easily excited to maturity, and may be brought into eating in November or retarded till March."

2. The second kind mentioned is the *Winter Nelis*, which is held in much esteem. Ripens from November to January.

3. *Columbia*.—This is an American variety which originated in Westchester county, in this state. Mr. Wilder states that having heard of this pear, he some

years ago dispatched a special messenger to the owner of the tree, and obtained half a bushel of the fruit, with which he was so much pleased that he did not regret the expense of twelve and a half dollars incurred in procuring it. Ripeens about the first of January.

4. *Glout Morceau.*—This has been confounded, as Mr. W. states, with the Beurre d'Aremburg. It is said to be a rich sugary pear, in season December and January.

5. *Passe Colmar.*—A hardy and vigorous pear, "Prolific to a fault," so that to obtain fruit of the best size and quality, Mr. W. states that it is necessary to trim out half the fruit-bearing spurs, which should be done in the month of March. Ripens from November to February, but may be kept till March.

An article recommending the "AMERICAN ARBOR VITÆ FOR SCREENS AND HEDGES," by A. SAUL, is worthy of notice. The first example of the use of the Arbor-Vitæ for the purpose here mentioned, ever seen by the writer, was on the grounds of the Messrs. DOWNING. The beauty and perfection of some screens in the gardens of those gentlemen, exceed anything of the kind we have ever seen. They are from sixteen to eighteen feet in height, the sides as true as the walls of a building, (though never trimmed) and impenetrable to sight. MR. SAUL states that the arbor-vitæ is entirely free from disease or tendency to decay; it preserves its freshness of green through the summer, and does not suffer from the effects of winter.

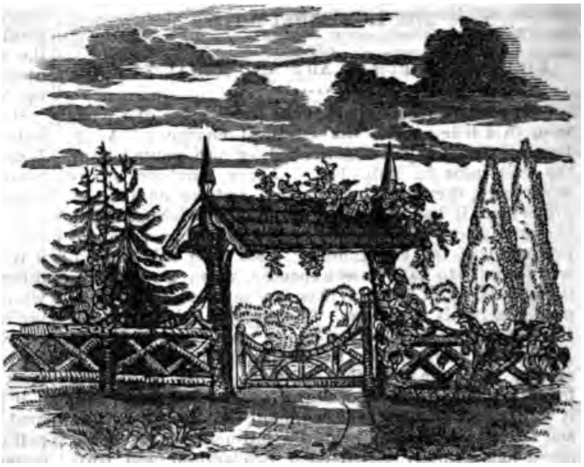

Fig. 86.—*Design for a Rustic Gate.*

The article "ON THE CULTURE OF PEACH ORCHARDS," by J. W. THOMPSON, of Wilmington, Delaware, contains much that is interesting and useful. Mr. THOMPSON states that the credit of introducing, on a large scale, the culture of the peach in Delaware, is due to Mr. ISAAC REEVES, a native of New Jersey. This gentleman and Mr. PHILIP REYBOLD, Jr., are said to be the two largest and most successful cultivators of this fruit in Delaware. Mr. REEVES formed a partnership some years since, with JACOB RIDGEWAY, of Philadelphia, and in the spring of 1832 they set out the first twenty acres of innoculated peach trees ever planted in the state, and their plantation was soon extended to 120 acres, the sales from which in one season reached sixteen thousand dollars. But it is added that peaches then commanded from $1¼ to $3 per basket containing 3 pecks. At this time, the extent of land set to peach trees in New-Castle Co., Del., is stated to be from 2,500 to 3000 acres. The price, of course, has diminished with the increase of production, ne present average, take one year with another, being from 30 to 60 cents per sket.

None but the best kinds re now cultivated; the object being to have them as arly and as late as possible. ll the trees are budded. The earliest, which begin to ripen the first week in August, are Troth's Early, arly York, Early Ann; and the later, which continue till the last of October, are Ward's Late Free, Heath, Winter. The mode of preparing the ground for peach orchards is said to be precisely the same as for Indian The trees are set in rows from 20 to 30 feet apart. The ground is cultivated in corn or some hoed cro ee years, when the trees begin to bear, after which no crop is grown, but the ground should be plowe or four times in a season. The average life of the trees is from nine to twelve years; and their greates

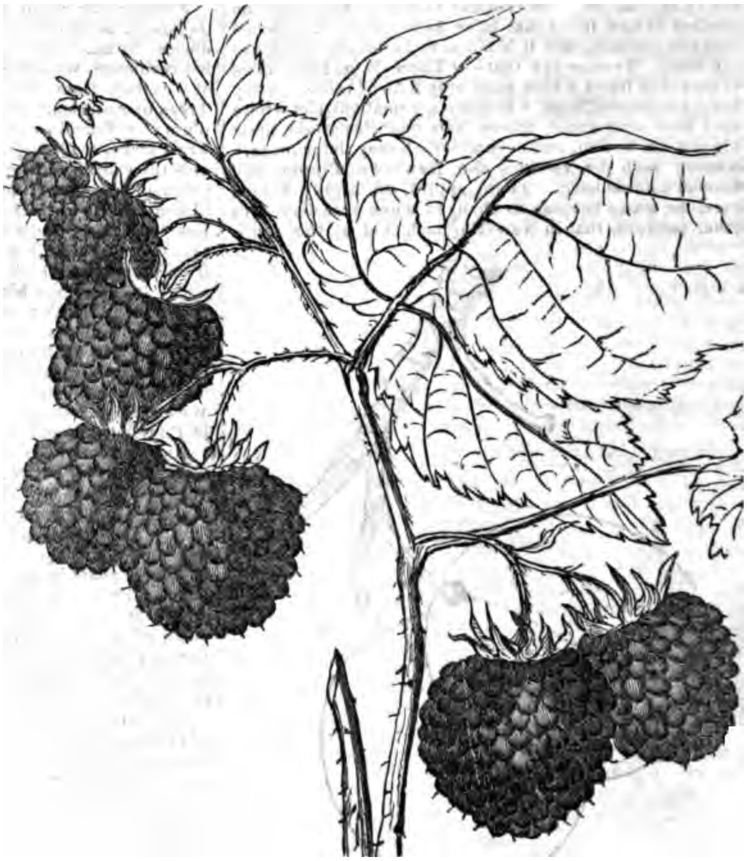

Fig. 87.—*The Fastolff Raspberry.*

enemies are the "peach-worm" and the "yellows." "The first," it is said "readily yields to the knife and the treatment of semi-annual examinations; the latter being a *constitutional*, *consumptive*, or *marasmatic disease*, for which no other remedy is as yet known or to be practiced, but *extirpation* and *destruction*."

The first article in the second number of the Horticulturist of which we would now offer any notice, is one on "THE BLIGHT IN THE PEAR TREE," by the editor. Mr. DOWNING believes that there are "two distinct maladies" known by the name of *blight*. One, he thinks, is caused by insects, and the other by the freezing of the sap. He remarks—"The *insect blight* we do not consider a malady of a very serious nature. As it begins at the extremity of the tree, at or near the ends of the branches, and as its spreading depends entirely upon the care or carelessness of the cultivator, it is his own fault if it ever destroys *many* trees. Experience and observation have convinced us that the pruning knife, vigorously applied the moment the insect first commences his attack in June, and faithfully persisted in, will soon rid one's garden or orchard of this minute but most poisonous *Scolytus*." As soon as a branch turns black, it should be cut off a foot below where it is affected or discolored.

Fig. 88.

The "frozen sap blight," Mr. D. thinks "another and much more alarming disease,—that it doubtless arises from the sudden freezing and thawing of the sap vessels in winter." Of this disease he speaks as follows;

"If any one will carefully examine a tree affected by the frozen sap blight, he will notice *spots* on the bark of the trunk or principal branches, which have a dead or withered appearance. The bark there is contracted, blackish, and is shrunk below the level of the surrounding healthy portions. This is often observable very early in the spring. As the season opens, the tree starts into leaf, and grows luxuriantly: suddenly, about the middle of June, sometimes a little earlier or later, a terminal shoot, a branch, or the whole tree, droops and dies.

"If we pursue the examination a little further with the knife, we shall find the inner portion of the bark next the wood—in short, that part where the downward current of sap takes its course—has assumed a blackish hue. This taint is not confined to that part of the tree, viz., the limb or branch where the *external* symptoms of the blight are shown, but extends, more or less rapidly, from that point through the whole of the rest of the tree, unless it is arrested by amputation in a very early stage."

Mr. DOWNING observes that—"the frozen-sap blight is not confined to the pear tree alone. We have seen it in several other trees not entirely hardy in this latitude, or which suffer from winters of unusual severity. Such are the Ailanthus, the Catalpa, and the Spanish Chestnut."

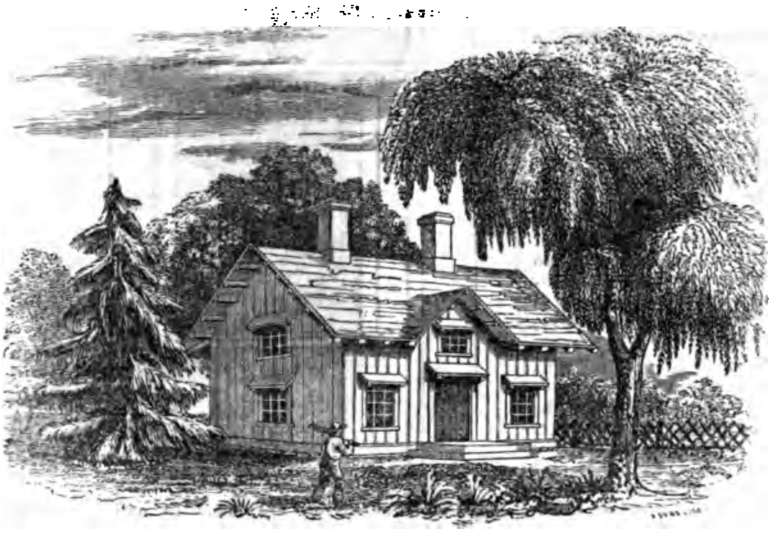

Fig. 89.

From the fact that these diseased spots almost invariably appear on the southern side of the trees, Mr. D. thinks that the injury is occasioned "by the too rapid *thawing* caused by the sun's rays which bursts the sap vessels, and is the immediate cause of the matter deposited on them. Were it the effect of frost simply, the evidences would appear equally on all sides of the trunk."

In answer to the question "What is the remedy for the frozen-sap blight?" it is observed—"For the blight in its milder forms, as we have already said, vigorous pruning is often sufficient to arrest its further progress. When it has thoroughly passed into the system of the tree, there is no known remedy. But perhaps a still more important question to the orchard grower of pears is this: Is there no certain preventive to this most destructive form of blight, for those soils and situations most exposed to it?

"It is with a view of suggesting such a remedy, that we have called attention to the subject at the present time. We propose to prevent the frozen-sap blight entirely, *by whitewashing the stems and principal branches of all valuable pear trees every autumn, after the leaves have fallen.* By this simple operation, we think the injurious action of the sun will be entirely prevented; its rays will be, for the most part, reflected, and the rapid thawing of any large part of the bark rendered entirely impossible."

Next we have an article, with an engraving, of the noted Fastolff Raspberry. This fruit was first brought into notice in England, in 1842, and has been the prize variety at the leading horticultural shows there ever since. Mr. DOWNING thinks it will be as highly esteemed here as it is there.

An article "ON THE CULTIVATION OF THE LILY TRIBE," by that judicious cultivator, JOSEPH BRECK, of Boston, cannot but be valuable to those engaged in that branch of floriculture.

"A NEW MODE OF GROWING SEA KALE AND RHUBARB," appears to consist in covering the plants, in the month of November, to the depth of fourteen inches with peat earth. The dark color of the peat is supposed to draw the heat of the sun, keeps the frost from the roots, so that they are "in a fit state to be excited into growth by the first bright weather in March."

The "DESIGN FOR A RUSTIC GATE," of which the above cut fig. 86, is an illustration, is pretty and tasteful. In reference to this kind of structure it is observed:—

"Rustic work is very perishable, if it is made of little bits of rough branches of any kind that are picked up in the forest after the wood-chopper. On the other hand, if it is always made of the branches of the common Red Cedar, so abundant in most parts of the country, it will last a long while, and prove both strong and serviceable."

The article on the "CARNATION, ITS HISTORY AND CULTURE," is a capital treatise on the culture and management of that fine flower.

The third number opens with a description, with neat cuts, (figs. 88 and 89.) of "THE SIMPLE RURAL COTTAGE, OR THE WORKING MAN'S COTTAGE." This article is also by the editor, who introduces some excellent remarks in regard to the various styles of architecture, and their adaptation to different edifices. In regard to the class of buildings under consideration, the writer remarks—"we wish to see the working man's cottage made tasteful in a simple and fit manner." In the two views here given, the object is to call attention to the exterior of the dwellings, leaving the internal arrangements to the taste or circumstances of the builder. The following remarks in reference to these plans will afford the necessary explanations.

"Whatever may be thought of the effect of these designs, (and we assure our readers that they appear much better when built than upon paper,) we think it will not be denied, that they have not the defects to which we have just alluded. The style is as economical as the cheapest mode of building; it is expressive of the simple wants of its occupant; and it is, we conceive, not without some tasteful character.

"Last, though not least, this mode of building cottages is well adapted to our country. The material—wood—is one which must, yet for some years, be the only one used for small cottages. The projecting eaves partially shelter the building from our hot sun and violent storms; and the few simple details which may be said to confer something of an ornamental character, as the rafter brackets and window dressings, are such as obviously grow out of the primary conveniences of the house—the necessity of a roof for shelter, and the necessity of windows for light.

"Common narrow *siding*, (*i. e.*, the thin *clap-boarding* in general use,) we would not employ for the exterior of this class of cottages—nor, indeed, for any simple rural building. What we greatly prefer, are good strong and [illegible] fourteen inches wide, and one to one and a fourth inches thick. These should be tongued and grooved so as to make a close joint, and nailed to the frame of the house in a *vertical* manner. The joint should be covered on the outside with a narrow strip of inch board, from two to three inches wide. The accompanying cut, fig. 90, *a*, showing a section of this mode of weather boarding will best explain it to the reader.

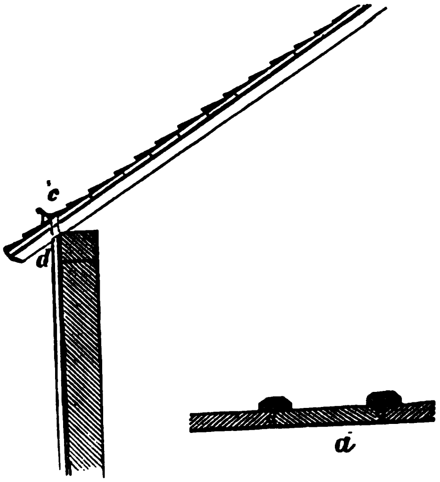

Fig. 90.—*Cottage Siding and Roofing.*

"The rafters of these two cottages are stout joists, placed two feet apart, which are allowed to extend beyond the house two feet, to answer the purpose of *brackets* for the projecting eaves. Fig. 90, *b*, will show at a glance, the mode of rafter boarding and shingling over these rafters, so as to form the simplest and best kind of roof.*

"The window dressings, which should have a bold and simple character, are made by nailing [illegible] weather boarding stout strips, four inches wide, fig. 91

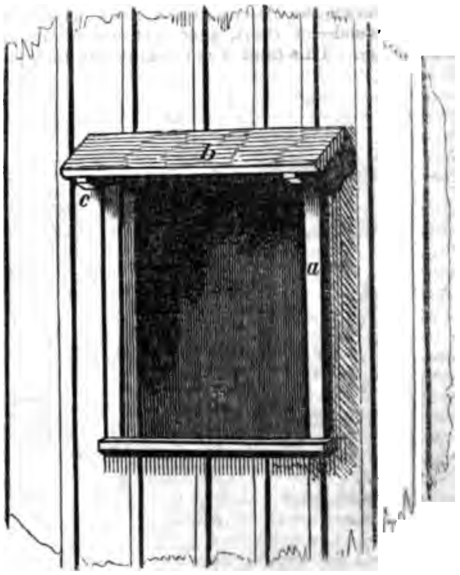

Fig. 91.—*Cottage Window Dressing.*

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* The simplest mode of forming an eave gutter on a projecting roof like this, is shown in the cut, fig. 90, at *c*. It consists merely of a tin trough, fastened to the roof by its longer portion, which extends up under one layer of shingles. This lies close upon the roof. The trough being directly over the line of the outer face of the house, the leader *d*, which conveys away the water, passes down in a straight line, avoiding the angles necessary in the common mode.

a, of plank, one inch and a half in thickness. The coping piece, *b*, is of the same thickness, and six to eight inches wide, supported by a couple of pieces of joists, *c*, nailed under it for brackets.

"We have tried the effect of this kind of exterior, using *unplaned* boards, to which we have given two good coats of paint, *sanding* the second coat. The effect we think much more agreeable—because it is in better keeping with a rustic cottage, than when the more expensive mode of using planed boards is resorted to.

"Cottages of this class, we would always paint some soft and pleasing shade of drab or fawn color. These are tints which, on the whole, harmonize best with the surrounding hues of the country itself.

"These two little designs are intended for the simplest cottages, to cost from two to five hundred dollars. Our readers will not understand us as offering them as complete models of a workingman's cottage."

We have given the above notices of the contents of "THE HORTICULTURIST," to furnish our readers with a general view of the work, which is entirely separate and distinct from "THE CULTIVATOR." Very rarely, if ever, will the same articles appear in both publications. Besides the more elaborate articles, to some of which we have alluded, a portion of each number of "THE HORTICULTURIST" is devoted to reviews of publications on such topics as come within its scope, and to Foreign and Domestic Notices, embracing translations from the French and German periodicals, and extracts from those of England, on rural subjects, together with everything transpiring in our country of particular interest to the horticulturist.

The Horticulturist is published on the first of each month, each number containing 48 pages octavo, printed in the best manner on paper of the finest quality, and illustrated in the same beautiful style as Mr. DOWNING'S previous works on Landscape Gardening and Rural Architecture. The engravings in the first number, consist of views of two country houses, six Plums and Pears, two Ornamental Trees, training Figs, and Swainstone's Strawberry. The frontispiece of the second number is a view of Mr. DONALDSON'S Vinery at Blithwood. The same number has eleven other engravings, including the Fastolff Raspberry. The third number has for a frontispiece, the two beautiful rural cottages, which we have transferred to this paper, and ten other cuts, embracing Fruits, Plants, &c. Terms, $3.00 per year—20 per cent. discount to Agents. The Agents for "The Cultivator," throughout the country, are respectfully invited to act as Agents for "The Horticulturist."

CURE FOR RING-BONE.

......

A. D. GAGE, of Macedon, N. Y., an intelligent and successful farmer, gives the following remedy for the cure of Ring-Bone, which he has known to be tried in numerous instances, without failure, when applied in an early stage of the disease. Where it has not been more than one or two years standing, from the appearance of the first symptoms, a cure is almost certain. Cases of longer standing are usually much benefitted, the growth of the ring-bone being arrested, when the disease is not cured.

The remedy consists in the application of a mixture of spirits of turpentine, oil of spike, and oil of vitriol, one ounce of each being a convenient quantity. The ounce of turpentine is first put in a strong bottle, the oil of spike added and well mixed, and then the oil of vitriol is introduced; the bottle is then firmly corked, and well shaken before used. Especial care must be taken that the turpentine and oil of spike are well mixed first, as the application of the oil of vitriol to pure turpentine, produces instant combustion. Considerable heat will be produced by the process already described. A common black bottle will do very well.

Then bathe the diseased part thoroughly, once a day for three days; drive the mixture in by the application of a hot iron. Then to prevent the part becoming too sore, suspend the bathing for three days, when it is to be again resumed. Some horses' feet are more quickly made sore than others; discretion must be used to prevent too great soreness. After three turns of applying the remedy, it may be discontinued; and the sore, thus produced, treated with lard, or other application, as in case of any other sore.

The remedy is supposed to owe its efficacy to the operation of the mixture as a *caustic*—acting upon and destroying the vessels which gradually secrete the ring-bone;—so that it may be strictly regarded as a *preventive*, proving effectual in cases of short-standing, and preventing the increase of those of longer continuance.

ROAD MAKING.

......

THERE is scarcely anything, next to the direct improvement of the farm, that is of more importance to the farmer, than good roads. He must necessarily spend a considerable portion of his time in travelling either long or short distances. The conveyance of produce to market, is alone a very considerable item of cost and labor. Many farmers are compelled to spend at least one day in seven, on an average, in driving on the road. It therefore becomes a matter of really serious importance, whether his horses accomplish this work with difficulty or with ease.

There are two or three points, which if sufficiently attended to by all road makers, would, *with no additional cost*, work a revolution in our roads—nay, more, would actually advance the price of land, in many well settled districts, to an aggregate amount of hundreds of thousands of dollars. The Erie canal added to the wealth of the country hundreds of millions; fine and easy roads, by virtually diminishing distances all through the country, would be of the highest benefit.

1. One of the most important points, is to preserve a *level*, as nearly as possible. This importance is strikingly exhibited by the computations and experiments for engines on railroads, the same principles applying in less degree, to common roads. It was found that an 18 ton engine,

On a level, would draw,............	700	tons.
" grade 10 ft. per mile,.........	452	"
" " 20 " "	332	"
" " 30 " "	263	"
" " 50 " "	185	"

That is, if a horse could draw seven tons on a railroad, on a level, he could not draw two tons up a slope of only one foot in a hundred. But a slope of only one foot in a hundred on a common road would be regarded by every one as about the same as a dead level;—what then must be thought of such ascents as are continually occurring, of one foot in three or four! The loss of power here must be enormous. But enormous as it is, and straining to a horse's every muscle and joint, it is in most cases entirely unnecessary. Many parts of the country are more or less broken up into irregular hills. But with most singular stupidity, the roads instead of being led judiciously *round* them, by slight curves, pass directly *over* them. Sir Joshua Reynolds said that if he were to paint Folly, he would represent a boy climbing over a high and difficult fence, with an open gate close beside him. He could have done it much better by exhibiting a road, for the accommodation of, say fifty teams a day, year in and year out, ascending a sharp hill and then down again, with a fine natural valley or level for the road twenty-five rods distant.*

Every common road to be perfect, should be laid out with some kind of levelling instrument, and where ascents must be made, proper curves should make them as easy as possible. Narrow and small gorges should be crossed by bridges or embankments. Let not the narrow policy that this or that man's fields are cut into an inconvenient shape, ever prevail. It is better for every farmer to have a three-cornered field, if he can only have level roads, on which his horses may draw double loads with ease.

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* Within a circuit of ten miles from the residence of the writer, there are not less than twenty cases where roads ascend and pass down sharp hills, at least fifty feet perpendicular height, while a very slight curve would place the road on nearly a perfect level, without adding five rods to its length.

2. The *material* for the construction of roads is very essential, and often entirely neglected. The surface of the earth is in many cases rich black mould or muck, very fine for the growth of potatoes and corn, but making horrible wagon tracks. It is however usually scraped into the highway for the very simple and cogent reason that it is scraped easily, being so much softer than the hardpan below, which though hard to work, would nevertheless be equally hard to get muddy. Sometimes, like the politician, who "steered between right and wrong," a midway course is taken, or rather both plans are adopted; that is, the muck is first scraped up into a high turnpike, and then a coat of hardpan covers the top—which does well for light wagons, but heavy ones cut through the crust into the manure below. One of the hardest and smoothest roads we ever saw, was the wide shallow *ditch* made by scraping the muck out, to form the turnpike, and thus leaving the clean hard-pan surface. What fine hard roads might be made in many places, by merely removing the black upper soil to enrich the adjacent fields.

3. A third important item, is the removal of loose stones. The law of the state of New-York requires that all road-overseers should cause these to be thrown from the road once a month, but it is rarely observed. It is believed that if this were strictly attended to, and our roads kept smooth, wagons and carriages would last double the time they now do, to say nothing of the discomfort of being thoroughly jarred a thousand times a day, and the rack to horses, harness, and merchandise. A single stone, against which every passing vehicle thumps like a sledge, may alone cost a hundred dollars a year by broken or shattered wagons.

The property invested in wagons in the state of New-York alone, is probably not less than ten million dollars. If by keeping the roads smooth, by the removal of stones, this enormous sum would need renewing only once in twenty-five years, instead of once in twelve years as now, would it not be an economical operation?

If a hundred thousand farmers in the state, do fifty dollars worth of teaming on the road, each, per annum, the yearly aggregate would be five millions. If their loads could be doubled, by making all the roads nearly level, would not the clipping off of a few farmers' fields for the passage of the road, be a matter of strict economy to individuals, as well as a great public benefit?

If besides, by all these improvements, bringing farms virtually nearer market and all other places of business, the price of land should rise, as it certainly would, at least to some extent, who would be the loosers?

PRESERVATION OF APPLES.

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We think the following extract from Downing's "Fruits and Fruit Trees of America," furnishes the best answer that can be given to the various inquiries we have received in relation to preserving apples.

In order to secure soundness and preservation, it is indispensably necessary that the fruit should be gathered by hand. For winter fruit the gathering is delayed as long as possible, avoiding severe frosts, and the most successful practice with our extensive orchardists is to place the good fruit directly, in a careful manner, in new, tight flour barrels, as soon as gathered from the tree. These barrels should be gently shaken while filling, and the head closely pressed in; they are then placed in a cool shady exposure under a shed open to the air, or on the north side of a building, protected by a covering of boards over the top, where they remain for a fortnight, or until the cold becomes too severe, when they are transferred to a cool, dry cellar, in which air can be admitted occasionally in brisk weather. A cellar for this purpose, should be dug in dry, gravelly, or sandy soil, with, if possible, a slope to the north; or at any rate with openings on the north side for the admission of air in weather not [illegible] cold. Her[illegible] the barrels should be placed on tiers *on their sides*, and the cellar should be kept as dark as possible.

When apples are exported, each fruit in the barrel should be wrapped in clean coarse paper, and the barrels should be placed in a dry, airy place, between decks.

BLIGHT SUPPOSED TO BE CAUSED BY THE BARBERRY.

……

Mr. Editor—Will a barberry-bush growing in a man's garden on one side of the highway, blast wheat on the other side, or is it possible it will blast it at all?

Eleven or twelve years ago, I brought, for the distance of 30 miles, a root of the barberry, which I planted in my garden. Having heard that it was a saying among the New-Englanders that it would blast wheat, I asked the person from whom I got it, whether he knew anything relative to the subject. He replied that he believed the idea erroneous, adding that he had raised wheat successfully on his farm for 20 years, and he believed that his barberries, (for he had three large bushes,) had no influence whatever on his wheat.

My neighbor, on the other side of the road, sowed opposite to my garden, some four or five acres of wheat. The lot contained two kinds of seed. The kind sown nearest the road, and cornering towards my garden, was principally blasted, while the other kind was bright and a good yield. Hence, the conclusion is, that my barberry bush blasted the wheat, and that I ought to cut it down. I am informed that there were a few years since, two large bushes in town, cut down under the same pretence.

Now I would not take $5 for my barberry bush, as it is an excellent medicine, a fine ornament, and the fruit makes excellent preserves,—yet as no man has a right to injure another, my bush shall be cut down, provided I can be convinced it is an offender.

Zetto Barnes

Fabius, Onondaga Co., N. Y., Sept. 1, 1846.

……

Remarks.—The idea formerly prevailed pretty extensively in some parts of New-England, that the barberry tended to blast grain, especially wheat and rye. In some districts where wheat was seldom grown, the belief that the shrub would blast rye, was quite common. We recollect seeing the matter put to something of a test. Some bushes came up in a field near a wall which formed a fence between the field and the highway. It was suggested to the owner of the lot that he had better dig up the bushes, as they would blast his grain. He, however, let them remain till they had for several years borne fruit. During this time the field was occasionally sown to rye, and the crop was strictly noticed to ascertain whether the bushes produced any effect, but none could be discovered—the grain being in all respects as perfect as had usually been produced on the farm, or on the same field before the bushes came up. We believe the notion of the deleterious effects of this shrub is now pretty generally exploded in the neighborhood to which we have referred.

In the Genesee Farmer, vol. iv., p. 158, Davii Thomas states that Humphrey Howland, of Greatfield, Cayuga Co., had raised excellent wheat, though "a very large barberry bush grew within three rods of the edge of the lot." Mr. Thomas also furnishes an extract from a letter of a correspondent of his, near Philadelphia, in which it is stated that "Seneca Lukens had a fine barberry bush which grew *at the side* of his wheat field without any perceptible injury to his crops." Mr. T. also quotes from a writer in the New-York Farmer, H. C., [Henry Colman?] who says, "for the two last years I have raised spring wheat *in the very near vicinity* of barberry bushes *without any perceptible injury*." No appearance of blast was discoverable.

We think our correspondent is very fair in offering to cut down his barberry bush if it can be proved to b[illegible] an "offender." But we hope his neighbors will be considerate enough to wait till the truth of their charges is clearly made out.

FEEDING WORK HORSES.

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We have long been convinced that the best mode of feeding horses that are kept in the stable, is to mix the grain in a ground state, with the hay or straw, after the latter has been cut with a machine. Experiments have demonstrated that a considerable saving both of hay and grain may, in this way, be made. We have lately met with an account of a method of feeding said to be practised by Dr. Sully, of Somerset, Eng., which, it appears to us, may be worthy of adoption, to some extent. He has no racks for hay, as he deems it wasteful to feed uncut fodder. The horses are fed in mangers, over the top of which, to prevent the horses from tossing out food, cross-bars are nailed at about a foot apart. The cut hay and straw, and grain are regularly weighed out. The food is sometimes varied; but thirty pounds of food is given to each horse every twenty-four hours. The following shows the articles of food given, and the different modes of preparing it, as well as the quantity which each horse daily receives:

No.	1st.	2d.	3d.	4th.
	lbs.	lbs,	lbs.	lbs.
1. Farinaceous substances, consisting of bruised or ground beans, peas, wheat, barley, or oats, ...	5	5	10	5
2. Bran, fine or coarse,............	0	0	0	7
3. Potatoes, boiled or steamed, mashed in a tub with a beater,...	5	5	0	0
4. Fresh grains, (boiled barley,)...	6	0	0	0
5. Hay, cut down into chaff,.......	7	8	10	8
6. Straw, ditto,....................	7	10	10	8
7. Malt-dust, or ground oil-cake,...	0	2	0	2
With 2 oz. of salt in each class.	—	—	—	—
	30	30	30	30

Of the four classes into which the ingredients are divided, Dr. S. most recommends those two which contain the steamed potatoes.

RECENT AMERICAN PATENTS.

Reported for "The Cultivator," by Zenas C. Robbins, *Mechanical Engineer, and Attorney for procuring Patents, Washington, D. C.*

For an Improvement in Fanning Mills—Daniel Clow, Port Byron, Cayuga Co., New-York, July 16th, 1846.

The principal novelty in this invention consists in combining two cylindrical screens of different textures; the one placed within and concentric with the other, with the vibrating screens of a fanning mill; so arranged that the mill can be operated in the usual manner, with the vibrating screens alone, or in combination with the double cylindrical screens.

Mr. Clow exhibited one of his improved fanning mills at the late National Fair, in this city, and it gave universal satisfaction. To illustrate the excellence and superiority of his mill for cleaning grain, Mr. Clow brought on with him a bag containing a mixture of wheat and every impurity that is ever found intermixed with it, one-half its contents only being sound wheat. By passing this mixture once through the mill, the sound wheat was perfectly cleaned and separated from every impurity, and from the light and shrivelled wheat.

CLOVER HULLING MACHINE.

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Mr. Tucker—In a a letter lately received from Mr. M. H. Mansfield, the inventor of the "Clover Seed Huller," reported in the Cultivator for August, he informs me that one of his improved hullers, with a cylinder twenty-two inches in length and fifteen inches in diameter, is capable of hulling forty bushels of clover seed per day. Z. C. Robbins,

Attorney and Ag't for Patents, Washington, D. C.

IMPROVEMENT OF WORN OUT SOILS.

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Mr. Tucker—As every one has his own peculiar notions, I have thought I would give you my experience on the improvement of poor land. About twelve months ago, I read a work on calcareous manures, by Mr. Ruffin, of Virginia. As well as I recollect, the author lays it down as a fundamental axiom, that poor land cannot be permanently improved by putrescent manures alone. While mounted on a favorite hobby, especially if he ambles pleasantly and willingly, we are too apt to spur and flog the beast to death. Such is the enthusiasm with which this very respectable author has got astride of his hobby of calcareous manures, that he is disposed to undervalue all others. It is an amiable error he has fallen into, and without at all underrating the true value of his favorite manure, I give you the result of my own experience.

About eight years ago, I began to practice the enclosing system on an old field containing some 50 acres of barren sand, nothing else appearing in the composition of the soil. I should say that five bushels of corn to the acre would be the maximum under the best cultivation. I ordered stock to be rigidly kept off. It clothed itself the first year in a few sickly weeds. I then cultivated it in corn, and after husking on the land, cut down the stalks and shucks and chopped them in three pieces, giving it twelve months rest; result, a manifest improvement in the growth of weeds. I again cultivated in corn—the crop much better, but still producing not more than seven or eight bushels per acre. I then followed the same plan of cutting down and resting. The growth of weeds increased very perceptibly; towards the last of winter I plowed in the weeds, and in the spring planted in corn, the crop yielding ten bushels per acre; again cut down the stalks, &c., which were succeeded by a dense growth of weeds; plowed them in as heretofore, and planted one half in Baden corn, the other half our common corn. Produce, Baden corn, 24 bushels per acre; common do., 12 bushels per acre. Again cut down the stalks, which afforded an unusual parcel of litter to spread over the land; and while I am now writing, I never saw a more luxuriant growth of rich weeds. I intend planting again in corn the ensuing spring, and may reasonably calculate on an increase of one-fourth of the crop. And here you will pardon me for a little moralizing, which I deem, while on a subject of this kind, not at all out of place.

Here you see is land reclaimed from utter sterility and made productive, and this too by no extraordinary exercise of skill or industry, for I know that I am yet in my horn-book in the science of agriculture, which is as much a science as any of the learned professions; but while I survey even my unskilfully cultivated fields, and enjoy the happy feelings which it inspires, I am overwhelmed with gratitude to my Maker who has so clearly indicated that true felicity consists in obedience to his will, in acts of benevolence, in subduing and cultivating the soil, and in such avocations as are calculated to make us wiser and better men; pointing to the gardens of Epicurus and of Shenstone, rather than the bloody fields of Arbela and of Austerlitz.

John D. Jones.

Topsail, New-Hanover Co. N. C.

POTATO ROT.

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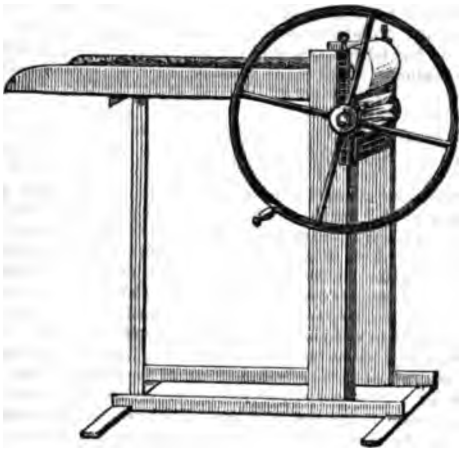
Mr. Tucker—As every thing in relation to this vegetable must be of interest to your readers, I communicate the following as the result of my observations. August 1st, examined my potatoes, Hill's Early and Chenangoes; they appeared all right. Within a week afterwards I found they were diseased very much. I dug them out and put them back in the drills, when the disease stopped. My late potatoes I found sound, and they have remained so. Last year my early ones were sound, and my late potatoes only were diseased. I witnessed, in a tour through a part of Maine, to the White Hills, and back to Massachusetts, what I took to be a general disease; but I have learned that in New-Hampshire, and round Boston, the disease was sudden and alarming, but from some cause, or want of cause, at once the disease was stayed, and the potato crop is likely to be a good one. This is doubly desirable, inasmuch as we learn by the steamer Brittania, that the rot is quite as alarming this, as it was last year. We hope they may be agreeably disappointed. The above is confirmed from a correspondent in Wilmington, Delaware, where the early potatoes only were slightly diseased; the late ones are found sound.

Norfolk Co., (Mass.)



HOVEY'S SPIRAL STRAW-CUTTER.—Fig. 92.

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Of all the various machines which have been invented for cutting fodder for stock, none have been more highly approved, after thorough trial, than Hovey's, a representation of which is above given. It has been frequently exhibited at Agricultural shows, and has, of course, been brought into competition with other cutters of almost every kind; yet it has not failed to receive the highest prizes on all occasions. Among the Societies whose highest premiums for cutting-machines have been awarded to Mr. Hovey, may be named the New-York State Agricultural Society, the Massachusetts Mechanic's Association, Massachusetts Society for Promoting Agriculture, besides several county agricultural societies in Massachusetts and other states. For particulars in regard to this machine, see advertisement in this number.

The advantages of cutting fodder for stock are so obvious, and seem now to be so generally admitted, that little need be said on this point. In the first place, by cutting, there is little or no waste of food. Secondly, the food is presented to the stomach in a condition the most proper for the digestive organs. Thirdly, an animal consumes less time in filling its stomach with cut than with uncut food. This is a very important consideration for laboring animals, which require all the rest and sleep they can enjoy, during the time they are not at work.

MADDER.

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Why is it that such a vast amount of money is annually paid by this to foreign countries for this article, when we have a soil and climate so admirably adapted for its production? There is no good reason why we should import madder, any more than that we should import wheat, pork, or cheese. It is one of the most sure and profitable crops to which the American farmer can turn his attention. It is not subject to be destroyed by frost, drouth, insects, or farm stock. The demand for it is increasing in the same ratio with our manufactures.

James Eaton, of Winfield, Herkimer county, has cultivated madder for 18 years. He has madder of three years' growth, planted at the rate of 1,500 hills to the acre, that will yield, if dug the present fall, over 3 lbs. to the hill; this he will not dig till a year from this fall, when it will yield 4 lbs. or over to the hill. He has other madder which at 4 years growth, will yield 64 cwt. to the acre, merchantable madder. It may be well to give notice to the readers of the Cultivator, that he will be able to meet orders for seed the present fall. It will be sold, boxed, and delivered at Utica, at $2.50 per bushel. It requires 6 bushels to plant an acre. Plant on rich, mellow, dry land. An acre of madder, properly cultivated, and of four years growth, at $16 per cwt.,—the price he has obtained for his—will amount to over $900. M.

[We wish Mr. Eaton would give us a communication describing the process of cultivating, and preparing madder for market.—Ed.]

IMPROVEMENT IN BUDDING.

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Mr. Tucker—The writer of this article supposes that he can suggest two improvements on the common rules of budding young trees; one in regard to the *time* of doing it, and the other in regard to the *mode* of doing it.

As to the *time* of budding, we are of opinion that the business has been generally deferred too long. The experience of the writer proves that August is better than any part of September; and that July is still better than August. By beginning to bud in July we secure several advantages; first, we find that the bark will peel more freely while the tree is in its most rapid growth; and this is of importance in the experiment. Secondly, by beginning early, if a bud fail of taking, there will be ordinary time to repeat the experiment. But if the bud *take*, as we say, we may gain a considerable *growth* the present year, and thus gain time.

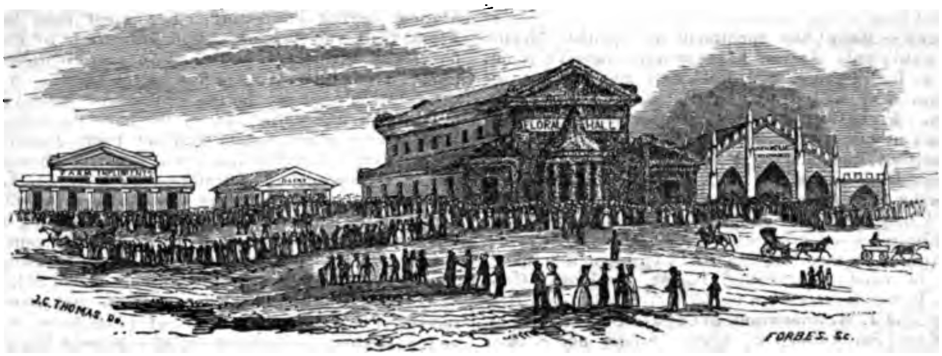
As to the mode of budding, it may be such as generally to have the buds grow the present year, if at all. Let them be inserted according to the usual mode, taking care when the bud is cut from the limb to *retain* the *sliver*, a woody substance which is cut off with the bud, as this will be more likely to preserve the eye uninjured. And now comes what we propose as the improvement, viz: clip off the end of every twig belonging to the limb in which the bud is inserted; and thus check the upward motion of the sap till the bud adheres or takes. Then, when you ascertain that a bud *has* adhered for growth, cut off the whole limb above the inserted bud as you have been, in the common mode, directed not to do until the next spring; and this will be followed by the starting and growth of the bud in a very few days.

This season I commenced budding in the latter part of July; and my success has been very satisfactory. Those inserted in the fore part of August, have done well, excepting those in plum trees, which have been a general failure. Peaches have succeeded the best, and pears next. I have several peaches which have begun their growth, (Sept. 3,) and one has grown several inches, and I think will grow a foot this fall. And they all appear to receive an impulse by this cutting off the limb above the inserted bud. I have also one pear which has begun to shoot forth, and others are promising to do it. As to peaches, I have no doubt that, were the limb above the inserted bud cut off at the time of insertion, it would favor the adhesion and growth of the bud, though I have waited till that took place. The latter mode, perhaps, needs an experiment.

As to the common mode of inserting the bud, and at the same time leaving the whole limb above to draw the sap, it is rather a wonder that the bud will take at all. It looks more rational that cutting it down partly or wholly, will leave more sap for the bud below and this will favor its growth.

I found the requisite bud to be inserted, as perfectly formed in July as afterward. R. T.

Prospect, (Conn.,) Sept. 3, 1846.


FLORAL HALL
J.C. THOMAS, Del.
FORBES, Sc.

THE STATE FAIR AT AUBURN.

View of the temporary buildings on the center of the Show-Grounds.

The Fair held on the 16th and 17th of the past month, was regarded as a whole, as about equal to that of last year; and the unabated interest of the people was evinced by the myriads which poured in upon the grounds from all parts of Central and Western New-York.

A piece of ground consisting of 12 acres on Capitol Hill, east of the village of Auburn, was chosen for the exhibition, which commanded a fine view of the surrounding country, extending forty miles west to the blue hills of Yates and Ontario counties. The general arrangement was nearly the same as that of last year, and the exterior aspect of the exhibition similar; but a most striking improvement was the architectural appearance given to all the buildings. Floral Hall was 150 feet long and 50 feet wide, with an irregular Grecian outline, the whole front with its fascades and portico, being densely clothed with evergreen. The light was admitted into the interior through a broad line of openings on each side above, softened by curtains of muslin, extending the entire length. This hall, in design, extent, arrangement, and finish, far exceeded any former one. A wide boarded platform or floor, 25 feet wide extended through the middle of the hall, on which were placed the terraced shelves for the exhibition of the flowers, vegetables, and fruits, and leaving a fine broad walk on either side. This line of shelves was interrupted at the centre of the building by a superb evergreen gothic temple 22 feet high, on a base of ten feet square, which added much to the imposing aspect of the interior, while the softened light from above on massive green columns and wreathes throughout the hall, gave the whole a truly magnificent appearance. This hall, and its decorations were designed by Dr. Alexander Thompson, of Aurora.

The three other halls, which were about 100 feet long and 30 wide, exhibited in their exterior design, a pure architectural taste. Two of them, one for the "DAIRY," and the other for the "FARM IMPLEMENTS," were in simple massive Grecian style, and the third, devoted to the exhibition of "DOMESTIC MANUFACTURES," was a beautiful building of the pointed Gothic form. These were all designed by George Casey of Auburn.

Great credit is due the enterprizing citizens of Auburn and its vicinity, for the unsparing liberality which they evinced in thus preparing for the exhibition. The untiring efforts of the ladies, who exerted themselves personally with the most praiseworthy zeal in these preparations, are also deserving of high commendation.

CATTLE.—The exhibition of Durhams was much more limited than on former occasions, though some very fine animals were on the grounds, from the yards of Messrs. Sherwood, of Auburn, Vail, of Troy, Allen, of Buffalo, Bacon, of Waterloo, Wakeman, of Herkimer, Parker, of Ballston, Button, of Newark, and Wells, of Johnstown, Hyatt, of Rochester, and some others. But few Herefords were exhibited; among them were 3 cows and a bull calf from Wm. H. Sotham, of Albany, and a very fine bull and cow from T. H. Hyatt, of Rochester. The display of Devons was excellent. Among the principal contributors were H. W. Washbon, of Otsego Co., S. M. Brown, of Onondaga, and L. F. Allen, of Buffalo. In the collection of H. N. Washbn, were a bull, two yoke of very fine steers, and other animals which the owner, with great public spirit had driven nearly one hundred miles to the fair, and which notwithstanding the fatigues of the journey, were unsurpassed on the ground. A pen of nine Devon calves, belonging to the same collection, excited very great interest, and indeed there was no part of the exhibition which was more interesting and beautiful. The native cattle and crosses were, with scarcely one or two exceptions, few and poor; and unless there is a reasonable prospect of an improvement, we think the suggestion of the chairman of the committee for their examination well worthy of attention,—that the amount of premiums on them be reduced, as some of these premiums are actually higher than the whole value of the animal itself. These remarks are of course not intended to apply to the superb display of working oxen, consisting of 16 yoke from Jas. S. Wadsworth, 10 yoke from J. M. Sherwood, and 11 yoke from several enterprising farmers of the town of Sennett. These attracted a great deal of attention from the congregated thousands on the ground, and as a whole were doubtless superior to those of any previous fair. But few fat cattle were exhibited; among them were two fine yoke from W. A. & J. Boies, of Homer, and two yoke from A. Pine, of Pittstown, and some cows from J. S. Wadsworth.

HORSES.—This part of the exhibition would compare very favorably with former years. There were a large number of stallions, and with very few exceptions, they were decidedly fine, some of them truly excellent. The Gifford Morgan Horse, 20 years old, possessing all the vigor and action of youth, from F. A. Wier, of Walpole, N. H., and his colt, 6 years old, from C. Blodget, Chelsea, Vt., excited universal admiration. A five year old stallion from C. Gaspar, Marcellus, Onondaga Co., was perhaps unexcelled for his beauty of outline, and approached as near the beau ideal of a handsome animal as anything we have seen. Several fine young horses of the Alfred stock, owned by Mr. Fordon, of Geneva, were much admired. Some of the matched horses were excellent. Mr. Fordon had also on the ground for exhibition, "Alfred," which took the first premium at the State Fair at Rochester, and the mare and colt to which was awarded the first premium at Utica. But in so fine and numerous a collection, it is impossible to point out within our brief limits, all that are worthy of attention, and for further particulars, see the premium lists. We ought here to notice the excellent recommendations of A. Ferguson, chairman of the committee, on the great importance of the establishment of veterinary schools, that scientific and concentrated knowledge may be brought to bear on the management and diseases of these invaluable animals.

Sheep.—Many fine specimens of Spanish Merino were exhibited. Several of these were from Vermont, from A. L. Bingham, and Rockwell and Sanford, of Addison Co., and from R. V. R. Horton, Hubbarton. From Connecticut were those of J. N. Blakeslee, and others. Among those from our own state, we noticed fine Merino sheep from James Randall, of Onondaga Co., and A. G. Percy, of Wayne Co., as worthy of commendation, and as also possessing the quality of not being overcharged with gum, which badly disfigured some otherwise excellent animals. Mr. Howard, of Owasco, Cayuga Co., exhibited fine specimens of what were called Paular Merinos. Good South Downs were shown by Z. B. Wakeman, of Herkimer, and J. M. Sherwood, of Cayuga Co. The number of long-wool sheep were few. Some, not sheared the present year, have wool 14 inches long.

The exhibition of Swine was rather meagre, nor did we notice any eminently worthy of attention, though a few fine animals were on the ground.

Implements.—Although the variety was hardly as great as on some former occasions, there were a number new and valuable, and the display was exceedingly interesting. The importance of this part of the exhibition, was shown by the hundreds of farmers who were constantly examining them, and thus at one view obtaining information of their construction and use, many of them, where admissible, being kept in constant operation.

Among those which we noticed, were the reaping machines of Hussey and McCormick, both of which excited great interest; Fitzgerald's portable burr-stone mill and horse-power, in operation on the ground, two horses grinding from three to four bushels per hour; several straw-cutters, among which were Webb's of Cayuga Co., Sanford's, from H. A. Chase, Rochester, and a large one for hand or horse power, recently constructed by George Catchpole, of Geneva, N. Y. A considerable number of horse-powers and of cultivators were also upon the ground. A newly invented sowing machine, by Jones & Smith, Fairfield, Ct., was shown, remarkable for its simplicity of construction, and for the effectual scattering of the seed, which was done by a rapidly revolving cylinder covered with projecting pegs, under the distributing box. A threshing machine and separator, of coarse wire seives; a clover mill, by Sharpe & Barrick, of Seneca Co.; a corn-planter, which furrows out, drops, covers, and rolls, at one operation, drawn by two horses, invented by John Long, of Livingston County; a sowing machine by P. Seymour, of E. Bloomfield, N. Y., for sowing broadcast, plaster, grass-seed, or grain, of any kind; a machine driven by horse-power, for cleaning buckwheat from grit, dried blossoms, and other impurities, and Hall's stump-machine, figured and described in a former volume of the Cultivator,—were all upon the ground. Among the horse-rakes, were L. M. Whitman's, Pike, Allegany Co., made with wire spring-teeth, revolving at the command of the rider, who holds a cord for the purpose; and one of simpler construction, also with spring teeth, from T. G. Yeomans, of Walworth, Wayne Co., possessing some decided advantages over former rakes. A flax-pulling machine, from H. Hill, Peruville, N. Y., excited much attention; flax is caught between a large rope with a rough surface, and a large horizontal revolving cylinder, on which the rope passes; the cylinder being slightly inclined. the rope rises as it passes round, and thus draws the flax from the ground, dropping it as it again leaves the cylinder, in a box on the opposite side.

The plows were excellent, but there were none new in construction and principle, and consequently an extended notice is not needed. Delano's Diamond Plow was generally regarded as fully equal, if not superior, though excellent ones were exhibited by J. B. Gaylord, D. Anthony, and others.

There was a fine collection of carriages and buggies, from several contributors.

The Contents of the four Halls, were in the highest degree interesting. The great rush was to Floral Hall, and its congregated collection of flowers, fruits, and vegetables, arranged in most brilliant display. The Flowers were fine for the season. Among the contributors were James Wilson, of Albany, who presented a fine collection of Dahlias, Verbenas, and other plants; a fine collection from Prof. Jackson, of Schenectady; fine Dahlias, from Edward Thomas, of Geneva; very neat and tasteful bouquets from L. L. Menand, of Albany; and many fine flowers in splendid bouquets and masses, from various sources, among which we particularly noticed those from E. T. Throop Martin, of Willow Brook, Owasco Lake. Ellwanger & Barry, of Rochester, exhibited a very select collection of Dahlias, consisting of 25 varieties, and handsome masses of intermixed Verbenas, of 12 different species and varieties. A splendid floral ornament terminated one end of the hall, designed by ——— ——— of Buffalo, composed of lettering of flowers on a dark green moss ground. H. Morgan, of Aurora, N. Y., and Elihu Tyler, of Buffalo, also presented fine flowers.

Of Fruits, the number of varieties was large, though in *quantity* they were less than on former occasions, which led to the erroneous impressions that the exhibition was deficient. Some of the best collections in the state were, however, not represented. The increased number of contributors of extensive collections proved conclusively the advancement in the introduction of fine kinds. Among the principal contributors, were E. C. Frost, of Chemung County, who furnished 30 varieties of apples; J. F. Osborn, of Port Byron, a large collection of apples; Elwanger and Barry, of Rochester, about 10 sorts of peaches, 40 of apples, and 60 of pears, with some fine exotic grapes; Charles Powis, of Greece, Monroe Co., a large collection of apples; H. Wendell, of Albany, fine peaches and pears; a large collection from Bissel & Hooker of Rochester; extensive miscellaneous collections from A. Bryant and B. Hodge, of Buffalo; also miscellaneous collections from Wm. Webb, of ———, and from ——— Allen, of Oswego. H. H. Coit, of Northern Ohio, presented a very fine and select collection of fruit, containing several specimens of uncommon beauty and size. Excellent specimens of Isabella grapes were exhibited by A. V. Pulsifer, of Auburn, some of the bunches being eight inches long, and a single vine, twenty-one feet long, had growing upon it eighty-one pounds of grapes, his success being mainly dependant on his excellent and thorough pruning.

We ought here to notice a striking inconsistency, which has hitherto existed at our annual exhibitions, which only needs to be seen to be rectified. Much complaint has been made of the meagerness of our horticultural exhibitions, and of the comparative fewness of the articles. This we believe will continue to be the case so long as the premiums on this department are so few and small. The present year, over *six hundred dollars* cash were offered in premiums on cattle alone. At the same time, while the fruit trade is rapidly rising in importance, and while many farmers we could name derive more profits from their orchards, than from all other farm crops put together,—the whole amount of all the premiums in cash the present year on fruit, was only *seventeen dollars*. This glaring disproportion becomes still more striking when we observe the great expense which is every year bestowed in preparing a place for the reception of these articles. One thousand dollars, more or less, is expended in the erection and adornment of Floral Hall—and seventeen dollars in premiums on the articles to fill its principal department.

The exhibition of vegetables was not extensive, but contained many fine articles. There were among others, a miscellaneous collection from C. F. Crossman, of Rochester; sweet potatoes from H. G. Dickerson, Lyons, a peck from two hills, though but partly grown; enormous winter squashes twenty inches in diameter, from H. G. Dickinson; and six enormous squashes grown from one seed, all shown attached to the vine, the last gest about two feet long, and the aggregate weight 573 lbs., from H. Hubbard, Canandaigua.

There was a fine display of many varieties of seed corn; and three specimens of wheat, the Soule's, Harmon's White Flint, and Kentucky White, were exhibited by Gen. Harmon, of Wheatland, and a very superior sample of White Flint from Martin Smith, Wheatland.

The MANUFACTURER'S HALL presented a very brilliant attraction by its numerous and splendid contents. Among these was a splendid display of carpets, of various degrees of excellence and finish; broadcloths of superb quality, and various other woolen articles; a very rich display of hearth rugs; bed quilts, a numerous collection, some of them truly splendid; specimens of fine cabinet ware from various sources; numerous specimens of ornamental needle work, skilfully wrought; rich specimens of raised worsted work, seat covers, and fancy chair work; stuffed quilts and worked quilts; bonnets and embroidered work. A large collection of domestic and household articles, made of silk, worsted, and other materials, was rendered very interesting by the fact that they were produced from the farm of Dr. S. Vorhees, of Amsterdam, and manufactured by his wife, the thread, floss, worsted, silk, &c., being all spun, wove, dyed, and manufactured by herself. There were also shell work of uncommon neatness, by L. C. Morris; very fine specimens of whips, by W. R. Strong, Rochester; a large collection of locks, from Price & Dana, Utica; cutlery from Ibbotson & Brother, and also by Holley & Merwin, of Salisbury, Conn., the latter of as fine a finish as the best imported articles; machine cards, manufactured by Hopkins, Sargent & Co., Auburn, N. Y.; stone ware, from N. Clark, Lyons, N. Y.; calculating machines, by A. Palmer, ; and portable shower baths, from —— Bates, of Rochester. A very simple and ingenious contrivance was Gifford's patent weather-strip, for completely excluding rain and snow from entering houses under weather doors, and which, projecting none, is scarcely visible when the door is open.

The hall appropriated to the productions of the DAIRY, contained but a small collection, and not at all comparing with the magnificent display at Utica, which is in the midst of a great dairy region. There were, however, some of excellent quality. That from E. R. Evans, of Oneida county, and from O. C. Crocker, of Broome, were in the opinion of the judges, fully equal to any made in the most famous butter districts in the country. Some excellent cheese was also presented for exhibition, by Robert Ells, of Westmoreland, Wm. Otley, of Phelps, and H. N. Washburn, of Butternutts, and others.

The hall for FARM IMPLEMENTS was variously occupied with stoves, fanning mills, straw-cutters, forks, hoes, grain cradles, bee-hives, &c. The stoves were of great numbers and variety, extending in two close rows nearly the whole length of the hall, and among them were cooking stoves for taverns and for farmers; air-tight-cooking; for the use of coal; elevated-oven stoves; double-oven stoves; parlor air-tight stoves, a large number of rich patterns; besides stove hollow-ware, steam boilers for washing, &c. There were also a planing machine, a boot crimping machine, a rock-drilling machine, a card printing press, &c., and a collection of highly finished steel farming tools, of various kinds, manufactured by F. Waters & Co., Westfield, Chatauque Co.

The plowing match took place on the morning of the 17th, ten competitors entering, and was said to be mostly well done.

On the afternoon of the last day of the Fair, many thousands assembled under the great tent prepared for the occasion, to hear the reports of the committees and the Annual Address from Samuel Stevens, Esq., of Albany. This address was extemporaneous, and was not intended by the speaker as a disquisition on the practical part of agriculture, but on its importance, and the means of adding to its dignity and pre-eminence. He stated that his pursuit in life, although not that of the farmer, had led him to reflect much on the salutary influence of agriculture on the welfare of the state and community—he urged the importance of more attention to the thorough education of our young men as farmers—the great truth that "knowledge is power," being pre-eminently applicable to this pursuit, and the consequent importance of directing its labors by MIND—and maintained that the common impression that it does not lead to wealth and power, is in consequence of less mind being brought to bear upon it than on the learned professions. He showed that agriculture holds essentially the highest rank in all the professions, being that which interests and confers happiness on the greatest number, and is hence at the foundation of the wealth of all nations, and their substantial prosperity, and contributing to the health and virtuous sentiments of the people more than any other pursuit;—that it furnishes the materials on which all the other arts depend—forms the distinction between savage and civilized life—that society began with agriculture, and civilization has kept pace with its advancement. He procedded to show that as agriculture is the most ancient and universal pursuit, so it requires for its successful prosecution the application of more mind, more knowledge, more intellect than any other—hence the importance of the knowledge of chemistry, mineralogy, vegetable physiology, and of light, heat, and electricity, in understanding the influences on the growth of plants, and of animal physiology and entomology, for the management of stock, and thwarting destructive insects. He did not say that this knowledge was absolutely essential, but *more necessary* than for any other pursuit. He urged the importance of more general and thorough knowledge, to fit farmers to form a useful constituent part of the community—that seventy in every 100 in this country were engaged in agriculture, and hence the paramount interest of the farmers in government—the importance of a knowledge of political economy, as they may by their superior numbers entirely control the government, and its measures—the markets,—foreign,—domestic,—are variously influenced, and should all be understood, as the surplus products, on which alone the farmer depends for his wealth, would be of no value without market. The address concluded with an appeal for the dignity of agricultural labor, and also for the more thorough diffusion of knowledge among farmers, to fit them in common with all other citizens, for the important, noble, and exalted duties required as members of the social circle, as well as for holding the powers of government for the welfare of the millions under its influence.

After the conclusion of the address, the premiums awarded on the various articles exhibited, were declared from the stand, and this great exhibition closed.

As an *after-piece* to the exhibition, there was a ball on Thursday evening, at Floral Hall, which is said to have been a brilliant affair. A cotemporary says—"*it was all that could have been wished.*"

The thanks of the many thousands who shared the private hospitalities of the citizens of Auburn, are eminently due for the kindness, liberality, and alacrity, which they evinced in so distinguished a manner on the occasion.

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LIST OF PREMIUMS,

Awarded at the N. Y. State Fair, Auburn, Sept., 1846.

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DURHAM CATTLE.

BULLS.—1st. J. M. Sherwood, Auburn, for Symmetry, $15; 2d. Wm. K. Grinnell, Ledyard, for Albion, $10; 3d. C. S. Button, Newark, for Osceola, Diploma.

Two-year-old bulls.—1st. H. M. Cary, Marcy, for Oregon, $10; 2d. J. B. Packer, Saratoga, for Tecumseh, Col. Tour.

Yearling bulls.—1st. Z. B. Wakeman, Herkimer, for Young Meteor, $10; 2d, A. G. Percy, Lyons, for May flower, Col. Tour; 3d. J. W. Bacon, Waterloo, for Waterloo, Dip.

Bull Calves.—1st. Geo. Vail, Troy, for Oscar, Col. Tour; 2d. J. W. Bacon, Waterloo, Diploma.

COWS.—1st. Geo. Vail, Troy, for Lady Barrington, $15; 2d. Edward Wells, Johnstown, for Venus, $10;

3d. J. W. Bacon, Waterloo, for Red Lilly, Diploma.

Two-year-old Heifers.—1st. H. N. Cary, Marcy, for Rose, $10; 2d. J. M. Sherwood, for Lalla Rookh, Col. Tour.

Yearling Heifers.—1st. Z. B. Wakeman, Herkimer, for Sylvia, $10; 2d. Edward Wells, Johnstown, for Cleopatra, Col. Tour.

Heifer Calves.—1st. Geo. Vail, Troy, for Willie 5th, Col. Tour; 2d. J. W. Bacon, Waterloo, for Lady Jane, Diploma.

HEREFORDS.

Bulls.—1st. T. H. Hyatt, Rochester, $15.

Young Bulls,—1st. and 2d. Corning and Sotham, Albany, $10 and Diploma.

Cows. 1st and 2d. Corning & Sotham, Albany, $15, and $10.

Heifers.—T. H. Hyatt, Rochester, $10; 2d. Edward Wells, Johnstown, Diploma.

DEVONS.

Bulls.—1st. L. F. Allen, Buffalo, $15; 2d. R. M. Remington, $10.

Young Bulls.—Geo. A. Mason, Jordan, $10; 2d. S. M. Brown, Elbridge, Diploma.

Cows.—1st and 2d. H. N. Washbon, Butternutts, $15 and $10.

Heifers—1st. H. N. Washbon, Butternutts, $10; 2d. L. F. Allen, Buffalo, Diploma.

AYRSHIRES.—(None offered.)

CROSS BREEDS.

Cows.—1st (not awarded.) 2d. H. N. Washbon, Butternutts, $10; 3d. J. W. Bacon, Waterloo, Vol. Trans.

Two-year-old Heifers.—1st. (not awarded;) 2d. Enos T. Throop, Owasco, $10.

Yearling Heifers.—1st. C. T. Baldwin, Owasco, $5; 2d. Geo. A. Mason, Jordan, Col. Tour; 3d. S. M. Brown, Elbridge, Vol. Trans.

Heifer Calves.—1st. H. N. Washbon, Butternuts, Col. Tour.

Discretionary premium, John G. Wheeler, Sennett, Vol. Trans.

NATIVES.

Cows.—1st. Ira Hopkins, Auburn, $15; 2d. Chas. W. Brown. Sennett, $10.

Yearling Heifers.—1st. Geo. A. Mason, Jordan, $5. 2d. Wm. J. Phelps, Owasco, Col. Tour.

Heifer Calves.—Nath. Lynch, Sennett, Col. Tour.

WORKING OXEN.

Best Ten Yoke.—1st. J. S. Wadsworth, Geneseo, $20; 2d. J. M. Sherwood, Auburn, $10: 3d. Sheldon, Fellows, and others, Sennett, Vol. Trans.

Best Single Yoke.—1st. E. Sheldon, Sennett, $15; 2d. J. S. Wadsworth, Geneseo, $10; 3d. J. M. Sherwood, Auburn, Vol. Trans.

Three-year-old Steers.—(Best yoke.) 1st. J. Boies, Homer, $10; 2d. J. S. Wadsworth, Geneseo, $5; 3d. Wm. Hayden, Mentz, Diploma.

Two-year-old Steers.—1st. E. Sheldon, Sennett, $10; 2d. J. Boies, Homer, Col. Tour; 3d. Amos Barnes, Sennett, Vol. Trans.

Yearling Steers.—1st. Herod Otis, $8; 2d. J. Boies, Homer, Col. Tour.

FAT CATTLE.

Best Pair Oxen.—1st and 2d. J. Boies, Homer, $15 and $10; 3d. A. Pine, Pittstown, Col. Tour.

Oxen or Steers.—1st. G. T. Oliphant, Mt. Morris, $10; 2d. Henry Willard, Cayuga, $5.

Cows or Heifers.—1st, 2d, and 3d. J. S. Wadsworth, Geneseo, $10, $5, and Vol. Trans.

HORSES—(For all work.)

Stallions.—1st. E. Fuller, Canandaigua, $10; 2d. Caleb Gasper, Marcellus, $5; 3d. Isaac Fairchild, Cortland, Diploma; 4th. Joseph Morrison, Ledyard, Vol. Trans.

Brood Mares.—1st. David A. Monroe, Camillus, $10; 2d. E. A. Howland, Venice, $5; 3d. Jos. H. Stanley, Cazenovia, Diploma; 4th. J. Boies, Homer, Vol. Trans.

Discretionary Premiums.—Reuben Tift, Veteran, for Black Prince, Vol. Trans.; Cyrus Breed, Oswego, for Golden Farmer, Vol. Trans.; Geo. Fordon, Geneva, for Perfection, Vol. Trans.

FOR DRAUGHT.

Stallions.—1st.—Benj. Pettit, Bridgwater, $10; 2d. S. F. Sellen, Lansing, $5; 3d. W. Colquhoun, Cornell, Canada, Diploma.

Mares.—1st. Jos. Mabbet, Skaneateles, $10; 2d. for a grey mare, owner unknown to the committee, $5; 3d. B. F. Bonney, Hamilton, Diploma.

BLOOD HORSES.

Stallions.—1st. Edward Long, Cambridge, for Sir Henry, $10; 2d. S. W. Holmes, Chatauque Co., $5; 3d. Nelson Little, Lodi, for Culpepper, Diploma; 4th. Mr. Ferguson, Oswego, for Kentucky Hunter, Vol. Trans.

Discretionary Premiums.—John H. Gardner, for Young Emperor, two yrs. old, $10; Ira McGonegal, for Virginia, Diploma.

Mares. 1st. Joel B. Nott, Albany, $10; 2d. Isaac Fairchild, Cortland, $5; 3d. G. Howland, Diploma; 4th. J. W. Coatman, Aurelius, Vol. Trans.

Three-Year-Old Stallions.—1st. Wm. R. Grinnell, for Champion, $10; 2d. Henry Tully, Tyre, $5; 3d. Isaac Fairchild, Cortland Co., Diploma; 4th. J. C. Burdict, Truxton, Vol. Trans.

Discretionary Premiums.—Jas. Black, Bath, for Matched Colts, Vol. Trans.

Geldings.—1st. A. Merrill, Rome, $5; 2d, to No. 518, owner unknown to the committee, Vol. Trans.

Matched Horses.—1st. Amos Lewis, Dryden, $10; 2d. W. A. Dutcher, Milo, Diploma; 3d. Olney Gould, Gaines, 2 Vols. Trans.

SHEEP.—Long Wooled.

Bucks.—1st. Wm. Van Heusen, Champion, $8; 2d. W. H. Sotham, Albany, Col. Tour; 3d. L. F. Allen, Buffalo, Diploma.

Ewes.—1st. W. H. Sotham, Albany, $8; 2d. Lewis Taylor, Skaneateles, Col. Tour; 3d. Wm. Buell, Rochester, Diploma.

Lambs.—L. F. Allen, Buffalo, $5.

MIDDLE WOOLED—(*South Downs.*)

Bucks.—1st. Z. B. Wakeman, Herkimer, $8; 2d and 3d, J. M. Sherwood, Auburn, Col. Tour and Diploma.

Ewes.—1st. J. M. Sherwood, Auburn, $8; 2d. Z. B. Wakeman, Herkimer, Col. Tour.

Lambs.—Z. B. Wakeman, Herkimer, $5.

MERINOS AND THEIR GRADES.

Bucks.—1st. Joseph Blakeslee, North Salem, $8; 2d. J. L. Randall, Col. Tour; 3d. Wm. Howard, Diploma.

Ewes.—1st. J. M. Sherwood, Auburn, $8; 2d. J. L. Randall, Col. Tour; 3d. William Howard, Diploma.

Lambs.—Reed Burritt, Burdett, $5.

SAXONS AND THEIR GRADES.

Bucks.—1st. S. B. Crocker, Vernon, $8; 2d and 3d. S. H. Church, Vernon, Col. Tour and Diploma.

Ewes. 1st. S. H. Crocker, Vernon, $8; 2d and 3d. S. B. Crocker, Col. Tonr and Diploma.

FAT SHEEP.

J. W. Collins, E. Bloomfield, $10.

SWINE.

Boars. 1st. C. R. Nicools, Darien, $10; 2d. G. V. Sackett, Seneca Falls, Col. Tour; 3d. H. Hubbard, Canandaigua, Diploma; 4th. Geo. Carlisle, Bethany, Diploma.

Sows.—1st. Wm. Howard, Owasco, $10; 2d. A. Shaw, Scipio, Col. Tour; 3d. E. T. Throop, Owasco, Diploma.

Pigs.—1st. Wm. Howard, Owasco, Col. Tour; 2d. Chester Moses, Skaneateles, Diploma; A. Shaw, Scipio, do.; C. N. Nichols, Darien, do.

POULTRY.

Dorkings.—L. F. Allen, Buffalo, $3; Polands—Franklin C. Moses, Skaneateles, $3; Large Fowls—J. F. Osborn, Mentz, $3; Ducks—J. F. Osborn, $3; Turkeys—M. B. Converse, Mentz, $3; Greatest Variety Fowls—Sam. R. Osborn, Flemming, $10.

PLOWS.

1st. Howland Delano, Mottville, Certificate; 2d. J. B. Gaylord, Auburn, Diploma; 3d. David Anthony, Springfield Vol. Trans.

WAGONS, HARROWS, &c.

O. Barton, Onondaga, Silver Medal.

Best Cultivator.—D. B. Rogers, Seneca Falls, Silver Medal.

Best Fanning Mill.—1st. E. Taylor, Rochester, Certificate, (Grant's Patent;) 2d. D. Clow, Mentz, Silver Medal; 3d. John Gilbert, Diploma; 4th. Orrin Heffron, Poplar Ridge, Vol. Trans.

Best Horse-Power.—Richard Montgomery, Onondaga, Silver Medal; 2d. John A. Pitts, Rochester, Diploma; 3d. Buell & Nichols, Cazenovia, Vol. Trans.

Best Corn Stalk Cutter.—1st. J. C. Rich, Monroe, Silver Medal; 2d. C. Burnett, Lyons, Diploma; 3d. George Catchpole, Geneva, Vol. Trans.

Best Threshing-Machine and Separator.—1st. John A. Pitts, Rochester, Silver Medal; 2d. E. Hicks, Wyoming, Diploma; 3d. Buell & Nichols, Cazenovia, Vol. Trans.

Drill Barrow, or Corn-Planter.—A. M. Badger, Rochester, Diploma.

Best Straw-Cutter.—1st. E. Lockwood, Norwalk, Conn., Silver Medal; J. C. Rich, Monroe, Diploma; 3d. J. W. Webb, Ledyard, Vol. Trans.

Best Corn and Cob Crusher.—John A. Pitts, Rochester, Certificate.

Horse Rakes.—L. M. Whitman, Pike, Diploma.

Hay and Manure Forks.—Barton & Belden, Rochester, Diploma.

Axes.—Barton & Belden, Rochester, Diploma.

Hoes.—R. M. Hine, Throopsville, Diploma.

Greatest Collection of Agricultuual Implements.—F. Waters, Chautauque, Silver Medal.

Corn Sheller.—T. D. Burrall, Geneva, Diploma.

[*Remainder of the premiums given next month.*]

INQUIRIES.

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Cheap Steaming Apparatus.—S. D. B., (Northwest, Williams Co., O.) You can make a cheap steaming apparatus by fitting a box on the top of a common kettle or boiler, in such a manner that all the steam generated shall pass into the box through holes made in its bottom. We have seen this made to answer a very good purpose—a boiler that would hold two bushels had a box placed on it that would hold four bushels; the kettle and box were both filled with vegetables, and while those in the kettle were boiling, those in the box would be cooked by the steam.

Transplanting Evergreens.—J. McM., (South Hanover, Ia.,) We have noticed the best success in transplanting such trees early in spring, while the ground is soft and moist, but have known them do well when set in the fall. We think they should not be pruned excepting to take off, carefully, dead limbs.

"Horse Nettle."—E. W. J., (Fort Defiance, N. C.) The plant sent under the name of "horse nettle," is the *Physalis pubescens*, of the natural order *Solanea*,—(potato tribe.) It is not common in this section. It is described as an annual, by Loudon. We are unable to say, from want of practical acquaintance with the plant, what would be the most ready mode of extirpating it; but we should think there would be no difficulty in keeping it down by constant cutting close to the ground, so that it should not form seed, or by working the ground often with the plow, or some tool that would destroy it. By either of these modes, it would, after a while, be eradicated.

Blood Spavin.—C. B., (Redford, Mich.,) In reference to blood spavins, Youatt says—"Repeated blisters will afford the fairest prospect of removing the tumor, or firing may be tried; but in the majority of cases, the disease will bid defiance to all our means, or will return and baffle our hopes when we had seemed to have been accomplishing our object. A horse with a bog (or blood) spavin will do very well for ordinary work. He may draw in a cart or trot fairly in a lighter carriage, with little detriment to his utility; but he will never do for rapid or hard work, and it is in vain to attempt to make him."

Calcareous Earth.—G. M., (Erie, Pa.) The sample of earth forwarded by you is calcareous tufa. It has been seen by Prof. Emmons, who thinks that its qualities are so obvious that it is not necessary to make an analytical examination. It is believed that it would make the best of lime by burning. The effects of the tufa, in a fine state, would be similar to those of carbonate, or air-slacked lime.

THE CULTIVATOR.

ALBANY, OCTOBER, 1846

TO CORRESPONDENTS.

Communications have been received, since our last, from Wayne, R. R. Child, J. W. Strong, Ed. W. Jones, Arator, John D. Jones, Wm. R. Prince, Z. Burns, J. W. Millan, J. D. Burdett, C. Betts, Norfolk County, R. T., G. N. S., B., Richard Owen, D. F. Marshall, E. N. Horsford, Agricola, W. R. Prince, Wm. A. Garriques, C., A. G. Carl, R. H. Williams, John Harland, J. R. Starr, B. P. Robbins.

Books, Pamphlets, &c., have been received as follows:—

The Trees of America, Native and Foreign, pictorially and botanically delineated, and scientigcly and popularly described. By D. J. Browne, author of the Sylva Americana. From the publishers, Messrs. Harper & Brothers, New-York. A beautiful large octavo volume of 532 pages. [Notice next month.]

Catalogue of the Ashton Nursery of Thomas Hancock, near Burlington, N. J.

Catalogue of Fruit and Ornamental Trees, Shrubs, Herbaceous Plants, &c., cultivated and for sale at the Nursery of J. J. Thomas, Macedon, Wayne Co. N. Y.

Prince's Descriptive Catalogue of Roses cultivated and for sale at his Linnean Garden and Nurseries at Flushing.

Silliman's American Journal of Science and Arts, for September.

Box of Pears from E. L. Holden, Shrewsbury, Vt [Received Sept. 24—too much decayed to permit us to form any opinion respecting them.]

The Farmer's Book and Family Instructor, compiled and published by J. Pritz, Chambersburg, Pa. From the publisher—570 pp. octavo.

Watermelon Seeds, from C. D. Smith, Chicago.

A number of Prize Lists and newspapers, from various individuals. The Western Farmer's and Gardener's Almanac. Indianapolis, published by Wm. Sheets & Co.

MONTHLY NOTICES.

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☞ Part VII of Colman's European Agriculture reached us too late for a notice in this number. It is principally taken up with the subjects of Draining, Sub-soil Plowing, Irrigation, Rotation of Crops, and Soiling, or House-Feeding. Published by A. D. Phelps, Boston.

Sale of Ayrshire Stock.—The Ayrshire herd of Geo. Randall, Esq., New-Bedford, Mass., is offered for sale at auction on the 6th of October. The herd consists of eight cows, thirteen heifers and heifer calves, and two stock bulls. Several of them are from the much celebrated Swinley blood.

Death of Judge Darling.—We learn by the New-Haven *Register*, that the Hon. Noyes Darling died at his residence in that city, on the 17th ult., at the age of 64. Judge D. was a gentleman of thorough education, and has been widely known, particularly as a writer on agriculture and horticulture. Our readers will recollect his frequent and able contributions to our columns, and will feel with us sincere regret that they are forever ended. In an obituary notice of his death, the Register says—"Though for many years prominent in public life, the employment which seemed most to interest him, was the cultivation of the soil, and that too by his own hands. He was a practical farmer, and horticulturist, laboring diligently not only on his own land, but in the field of science, wherever he could make it applicable to his favorite pursuit."

Rensselaer County Ag. Society.—The exhibition of this society took place at Troy on the 23d and 24th September. Want of room compels us to defer a particular notice till next month.

Death of Col. McDonald.—We learn with much regret, that Col. Alexander McDonald, of Eufaula, Alabama, died on the 16th of August last. Our readers will recollect his name, as having frequently appeared in our columns. He was much devoted to the cause of improvement in agriculture, and by his zealous efforts conferred very important benefits on the section of country in which he resided.

Agricultural College.—We see it announced that James Gowen, Esq., of Philadelphia, has purchased the Mount Airy College property, near his residence, "with a view to the establishment of an institution for the instruction of youth in theoretical and practical agriculture, including horticulture, upon the most approved principles of enlightened experience and rational science." Mr. Gowen has been long known as a most devoted friend to the agricultural interest, and one possessed of ample means for carrying out such an undertaking. We have not yet learned the details of the plan, but understand that Mr G. intends to employ the ablest teachers, and will make the course of instruction as liberal as that of any of our colleges. When the scheme is more fully developed, we hope to be be able to give the particulars in full.

Mr. Mitchell's Return.—By a letter from D. G. Mitchell, Esq., dated ship Burgundy, off Sandy Hook, 10th Sept. last, we are much pleased to learn of that gentleman's safe arrival, after an absence from this country of about two years. Our readers, by whom Mr. M.'s interesting letters from Europe were so well received, will be pleased to know that he will furnish us with occasional extracts from his unpublished notes.

New and Useful Machine.—Mr. L. G. Hoffman, of this city, has invented an egg-hatching machine, which appears to possess many advantages over any other for that purpose that has been before known, particularly on the score of cheapness and simplicity. Mr. H. has had his machine for some time in operation, and he feels confident that it will bring out 98 chicks to every 100 eggs, provided the elements of life existed in the eggs at the commencement of the process. The machine is about two and a half by two feet square, and capable of hatching from 500 to 600 eggs at a time. It is made of tin, and surrounded by water warmed to a suitable degree of temperature, by two heaters, on either side, one heater adapted for charcoal, for day use, and the other for night, by a solar lamp, burning less than a pint of damaged lard. Connected with the oven proper, is a brooding chamber, so constructed that the same heat which imparts the necessary temperature to the oven above is reflected in the chamber below, throwing a gentle warmth, on the "mother," (a dressed sheep skin with the wool on, fitted to a frame, and capable of being raised or depressed to the size of the chicken,) which is intended to take the place of the natural parent.

Mr. H. estimates the cost of a machine, capable of hatching 1000 eggs, between forty and fifty dollars, and the expense of producing the 1000 between $1 and $1.50 for the cost of the heat. We noticed several young turkeys and chickens in Mr. H's aviary, which appear as healthy and active as any of their brethren of the barn-yard and farm. A patent has been applied for.

Etrurian Wheat.—A correspondent in Onondaga county, is desirous of obtaining a few bushels, or a smaller quantity of this kind of wheat. It is said to have been introduced into the country by Com. Chas. Stewart, from Italy. The advantages are, that it is not liable to be injured by the Hessian fly, is hardy, and yields well. It is described as a white winter wheat, without beards. Will some one inform us where this wheat can be had *pure*, and at what price?

Merino Sheep.—E. W. Drury, Esq., formerly of Middlebury, Vt., lately passed through this city on his way to Wisconsin, with several Merino sheep, which had been selected chiefly from the flocks of R. V. R. Horton, of Hubbardton, and S. W. Jewett, of Weybridge, Vt. Both these flocks are well known. Mr. Drury handed us a memorandum of the weights of the fleeces of some of Mr. Horton's sheep, for the present season, from which it appears that five bucks, (three yearlings and two 2 years old,) gave an average of 11 lbs. 3 oz. of wool—the fleeces ranging from 8 lbs. 8 oz. to 14 lbs. 7 oz. The memorandum also states that ten ewes of this flock averaged 7 lbs. 1 oz.—ten others 6 lbs. 6 oz.,—ten others 5 lbs. 9 oz.,—and one ewe, five years old, 11 lbs. 1 oz. A certificate is appended to the memorandum, signed by Ira A. Havens, Henry N. Skeels, Lowell C. Gregory, and E. L. Hartwell, stating that they were present while the sheep were sheared, that the fleeces were correctly weighed, and that it was well-washed, clean wool, of good quality. Mr. Horton's flock is stated to have been bred wholly from that of Andrew Cock, formerly of Long-Island.

Meeting of Wool-Growers.—We learn that a meeting of twenty-two representatives of the wool-growing interest, from Pennsylvania, Virginia, and Ohio, was held at Springfield, Mass., August 18th last, at which Alexander Campbell, of Virginia, was appointed chairman, and William H. Ladd, of Ohio, appointed Secretary. The object of the meeting was declared to be to devise measures for ascertaining from time to time, the value of wool both at home and abroad, in order to facilitate sales and secure fair prices. A committee, consisting of Samuel Patterson, of Pennsylvania, Jesse Edgington, of Virginia, John Brown, now of Massachusetts, Wm. H. Ladd, of Ohio, and L. A. Morrell, of New-York, was chosen for the purpose of soliciting information upon the general subject of wool-growing and manufacturing in the United States; the said committee to report to a general meeting of wool-growers to be held at Steubenville, Ohio, on the 4th of February next. In the mean time the secretary is to see that a suitable address is made to wool-growers, setting forth the advantages that will accrue from a combination of effort and action in advancing the wool-growing interest.

Disease among Horses.—It is stated that more than 500 horses died on Long Island during the months of July and August—mostly in the latter month—from an epidemic, which seems to have been of a malignant character. No satisfactory cause has yet been ascertained for the disease, nor any successful mode of treatment discovered, so far as we have learned. It is stated in some papers that those horses only which have been at grass at some time during the season, have been attacked.

Improved Shower Bath.—Among several improvements in the construction of shower baths, which have come under our notice, none appear to us to combine as many advantages as one invented by H. R. Prouse, of Troy, and for sale by J. S. Gould, of this city. By means of a pump, which is very easily worked by the hand of the bather, the water is raised from a reservoir at the base of the bath, and precipitated in a shower over the body. Any quantity of water, from six quarts to six pailsful, may be used, and the bath may be prolonged any length of time, at the will of the operator. The water may also be thrown with greater or less force, as is desired. It is readily cleansed, the water being drawn off by the pump.

A Good Cow.—A correspondent at Lyons, N. Y., informs us that he has a cow from which was made thirteen pounds of butter in one week—(from 9th to 16th June.) Her milk was grass-feed only, and no extra pains were taken with the milk. He further states that on the 20th of June, the milk yielded by this cow weighed sixty-one and a half pounds. The cow ran in a red-clover pasture. She was got by a Durham bull, and her dam was a mixture of Holderness and Tees-water.blood.

Curing Pork in Hot Weather.—Many have experienced difficulty in curing meat, especially pork, in hot weather. Mr. Field, of Charlemont, Mass., informs us that he has practised the following mode with complete success. Pulverize double the quantity of ice that is used of salt; mix the salt and ice together in salting the meat—that is, scatter the salt and ice over the meat as the layers are packed. The mixture of salt and ice produces a great degree of cold, and the meat is quickly cured.

Fruits.—Since our last we have received the following fruits: From F. Armes, Conway, Mass., specimens of apples, for a name. The same apple has also been received through Mr. Mayell, of this city, from Saratoga. We are unable to identify it, but it is a very good apple for the season, and highly deserving cultivation. Will Mr. Armes send us a few scions for next spring? From J. C. Hastings, Clinton, Oneida Co., samples of a seedling pear which originated in his neighborhood. We regret that the specimens were so much over-ripe when they reached us as to render it impossible to judge of the quality with certainty. We are inclined to think it deserving trial. From John Lossing, of this city, fine specimens of the Bartlett pear, one of which weighed ten ounces. From C. Van Benthuysen, specimens of the White Magnum Bonum, or Egg plum, one of which measured 6¼ inches in circumference. From E. Dorr fine specimens of the Lemon Clingstone peach; also a good seedling free-stone, and fine samples of the Isabella and Wellington grapes.

Rot in Potatoes.—An article on this subject from Norfolk county, Mass., will be found in another part of this number. Since it was put in type, we have received a note from the writer stating that late examinations have convinced him that the crop in his section has suffered from this cause to a much greater extent than had been previously supposed.

Correction.—Mr. Z. C. Robbins wishes to make the followng correction:—"In reporting Mr. Dubois' improvement in carriage brakes in the last number of the Cultivator, the word *hounds*, (a well known technical term with wagon and carriage makers,) was printed *hands*."

Long Wool.—Mr. Edward Hallock, of Milton, Ulster county, N. Y., has sent us samples of the fleeces of four yearling ewes. The samples are from eight to ten inches in length, without stretching, and the fleeces from which they were taken, are stated to have weighed, respectively, 8, 8¾, 8¾, and 9¾ pounds. They are so perfectly clean, that the samples have not in the least soiled the paper in which they were enclosed, though the package has been under a slight pressure for ten or twelve days. Mr. Hallock's flock consists of improved Cotswolds, with crosses of the Leicesters. We have seen some capital sheep from this flock at various cattle-shows.

Cotton Culture.—G. C., St. Josephs, La., requests that some of our "able Southern correspondents would occasionally give a treatise on the most approved mode of cultivating cotton—also the best way of preparing it for market, the diseases to which the crop is subject," &c. We shall be glad to hear from any of our southern readers on these matters.

Musk-Rats caught by a Cat.—Mr. Leech, informs us that he has a cat, which, though he will not, (as he says,) catch "cockroaches" will catch "almost everything else." He says—"she often goes a hunting round a pond, and has brought home *thirteen good-sized musk-rats this summer.*"

NEW PUBLICATIONS.

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American Journal of Science and Art.—The September number of this capital periodical contains articles on the Hurricanes of the American Seas; on Zoophites; on the Law of Electro Magnetic Induction; Chemical Examination of Waters; Observations on the Fossil Plants of the Coal Field of Tuscaloosa, Alabama; Generality of Magnetic and Diamagnetic Action, &c. Under the head of Scientific Intelligence, we notice several interesting articles, particularly a very able one on the Rot in Potatoes, by John P. Norton. The work is edited by the Messrs. Silliman and Dana, and published at New-Haven on the first day of every second month at $5 per year. W. C. Little & Co. are agents for this city.

Remarks on the Culture of the Grape and the Manufacture of Wine in the Western States; by Melzer Flagg, M. D., of Cincinnati. This is a valuable pamphlet, which constitutes the report of a committee appointed by the Cincinnati Horticultural Society, for the purpose of collecting statistics in relation to the vineyards of Hamilton county, Ohio. The section to which this report refers, is the most distinguished for the successful culture of the grape, and especially for its manufacture into wine, of any part of this country. From the statistical table appended to the report, it appears that there are in Hamilton county 83 vineyards, containing 250 acres—114 acres being in bearing condition—from which 23,219 gallons of wine were made last year, notwithstanding many of the vineyards there bore for the first time, and that "more than half the crop was cut off by frost and rot." The average yield per acre, for five years in succession, with proper care, is estimated at 450 to 500 gallons annually. Analyses of the wines of different varieties are given, which, compared with those of European manufacture, show that American wine contains a greater per cent of alcohol than the best Rhine wine, and it is stated will compare with the best European *pure wine*. The report also contains much more information of a valuable character, and we shall recur to it again for the purpose of a more extended abstract.

MASSACHUSETTS SOCIETY FOR PROMOTING AGRICULTURE.

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At the annual meeting of the Massachusetts Society for promoting Agriculture, held June 10th, 1846,

The Hon. John Welles, the President of the Society, communicated his wish not to be re-elected an officer of the society:

Whereupon it was voted—

That we receive with great regret the resignation of our respected President, who for more than a quarter of a century, has with zeal and intelligence labored in the promotion of Agriculture, and who in his whole life, has exhibited to his fellow-citizens a valuable example of activity and of unostentatious devotion to the best interests of society.

[A copy of the record.] Benj. Guild,
Rec. Sec'y of Mass. So. for Promoting Agriculture.
June 20th, 1846.

……

[The *New England Farmer* was the official organ for the publication of the transactions of the Mass. Society, but as the discontinuance of that paper, at the close of its twenty-fourth volume, precluded a public notice in its columns of Mr. Welles' resignation, we with pleasure give the above an insertion; and we beg leave, at the same time, to respond to the sentiment embraced in the resolution of the Society relative to the important aid which has for many years been rendered by Mr. W. in advancing the agricultural interest of Massachusetts. That state may be said to have taken the lead in the establishment of agricultural societies and in giving the first great impulses to a spirit of rural improvement, to the extensive diffusion of which the whole country is so largely indebted for the signal prosperity it has enjoyed. The Society over which Mr. Welles for twenty-five years presided, and of which he has ever been one of the most zealous and liberal supporters, was organiznd in 1792. At an early period we find his name enrolled among the members. Of his contemporaries, we recognize the names of Derby, Quincy, and Jaques, among the few who yet remain; Pickering, Lowell, the two Vaughans, Parsons, Sullivan, and many others, "rest from their labors," though all will be long and gratefully remembered.]

SEEDLING APPLE TREES FOR SALE,

BY T. G. YEOMANS, at his nursery, Walworth, Wayne Co., N. Y., one year old, and thrifty, being from about 5 to 18 inches high, at $3 per thousand. Packages of 5000 packed free of charge. 50 cents per 1000 for less. Orders to be post-paid, accompanied with remittances.

Oct, 1—2t.

FRUIT TREES FOR SALE CHEAP.

AT the Walworth Nurseries, about 7000 thrifty Peach Trees, of the choicest varieties cultivated in Western New York, at $15 per hundred, or 18¾ cents smaller quantities. Also, several thousand Pear, Plum. and Cherry trees, of select varieties. Address, post-paid, at Walworth, Wayne Co., N. Y

Oct. 1—2t. T. G. YEOMANS.

PREMIUM DAGUERREOTYPE PORTRAITS,

At **GAVIT'S** *well known Galleries, No. 6 Second Floor Exchange, Albany.*

THE subscriber wishes to announce that a perfect Daguerreo type can be procured at all times at his rooms, and would refer those who wish to patronize him to the many flattering notices of the press generally. Also that he has taken the *first premium* at the last *two* exhibitions of the State Agricultural Society at Utica and Auburn.

Instructions given in the art on the most scientific principles and at moderate terms. Every article used in the business furnished to order

Caution.—The undersigned would caution those wishing to learn the business, to beware of the instruments furnished by most *travelling operators*, as they are mostly useless articles.

Oct. 1, 1846. D. E. GAVIT.

DUTCHESS AGRICULTURAL INSTITUTE.

Located twelve miles east of the village of Poughkeepsie, on the "Wilkinson Premium Farm," in the western valley of Union Vale, Dutchess Co.

THE winter session of this institution commences the first Thursday of October; the summer session the first Thursday of April.

The course of studies in this institution is such as to give the student every facility for acquiring a most thorough knowledge of *Scientific and Practical Agriculture*. with the use of the best modern improved implements; a select Farmer's Library, with numerous Agricultural Periodicals, and instruction in all the collateral branches.

There will be regular lectures, of which the students will make abstracts, to serve both as examinations and as exercises in composition. delivered on

TECHNICAL MINERALOGY—applied to Rural Economy, Commerce, Chemistry, Mining, and Architecture—illustrated by Mineralogical Cabinet, and excursions for observation.

PRACTICAL BOTANY—applied to Horticulture, Veterinary Medicine, Rural and Domestic Economy—illustrated by living specimens, and excursions for observation.

ZOOLOGY—applied to Rural Economy, Commerce, and Manufactures—illustrated by living subjects, skeletons, &c. The Zoonic course will commence with the HORSE.

NATURAL PHILOSOPHY AND AGRICULTURAL CHEMISTRY—illustrated by efficient experiments, by Prof. S. E. HASKEL, late of the Van Rensselaer Institute, of Troy.

Mathematics, in all their branches are thoroughly taught.

A practical knowledge of the Modern Languages is insured by weekly Lectures, Discussions, Orations, Essays, and Conversations in them.

The soil of the farm embraces a great variety, and is well adapted to experimental farming. Its location is pleasant and healthful,—the building extensive and commodious.

Fee for the year, $200, payable semi-annually in advance—which includes Tuition, Board, with beds and bedding, Toilette Furniture, Washing, Mending, Fuel, and Lights.

☞ Farmers, pupils from other schools, or other citizens desirous of attending each or any course of lectures, can obtain admission tickets by applying to the Principal; for a single course for $5, or $3 per course where they attend two or more—payable in advance. Extensive accommodations for horses are provided.

This Institution is under the patronage of the Am Ag. Association, The Farmer's Club of the Am. Institute, and the Dutchess Ag. Society. Address JOHN WILKINSON,
Principal Dutchess Ag. Institute, Poughkeepsie, N. Y.

REFERENCES.

Board of the American Institute:
Board of the American Agricultural Association;
Rev. L. M. Vincent, New-York;
Prof. Cyrus Mason, " "
Zebedee Cook, Esq., " "
Doct C. H. P. McLellan, Principal of the Poughkeepsie Female Academy;
Charles Bartlett, A. M., Principal Collegiate School, Poughkeepsie;
William A. Davies, Esq., President oi the Farmers' and Manufacturers' Bank;
Matthew J. Myers, Esq., President of the Merchants' Bank;
Rev. Abm. Polhemus, Hopewell, Dutchess County;
" H. G. Ludlow, Poughkeepsie; " "
" S. Mandeville, La Grange; " "
John Van Wick, Esq., New Hamburg. "

Oct. 1—2t.

NURSERY OF J. J. THOMAS,

Macedon, Wayne Co., N. Y.

A FINE collection of fruit trees are offered for sale at this nursery, *all* of which have been propagated from *bearing trees*, whose genuineness or excellence, and fitness for the climate, have been thoroughly proved by the personal examination of the proprietor. It has been a principal object to avoid the confusion resulting from a numerous list of varieties, and to present only a moderate collection of the very finest kinds. To accomplish this, many years have been occupied, and selections have been made from several hundred sorts in bearing, none but the finest being chosen, after thorough examination and trial.

The Ornamental Department comprises a very select list of hardy shrubs and herbaceous perennial plants.

The new Catalogue of this nursery will be forwarded gratis by mail, on every post-paid application.

Oct. 1—2t

ISABELLA GRAPES,

OF proper age forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success (provided their location is not too far north) All communications, post-paid, addressed to R. T. UNDERHILL, M. D., 400 Broadway, New-York, will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the northern, and all the western, middle and southern states. The full is found to be as good a time for planting vineyards as the spring, if not deferred too late in the season.

New-York, Oct 1, 1846—2t.

CHERRY STOCKS FOR SALE.

A FEW thousand fine Cherry Stocks, of mazzard varieties, of one years' growth and from one to two feet high, for sale on all pre-paid orders, at $10 per thousand, with no charge for packing, by J. J. THOMAS,

Oct. 1. at his nursery, Macedon, Wayne Co., N. Y.

MOUNT HOPE BOTANIC NURSERIES,

Rochester, N. Y., (South St. Paul-st., nearly opposite the Cemetery.)

THE Proprietors of this establishment offer for sale an unusually large and fine collection of Fruit and Ornamental Trees, Flowering Shrubs, Vines, and Roses, Hardy Herbaceous Plants, Double Dahlias and Bulbous Roots; Grape Vines, Raspberries, Strawberries and Gooseberries; Asparagus Roots, Rhubarb, &c.; Hedge Plants, Green House Plants, &c.

The collection of Fruit Trees comprises the most popular varieties cultivated, and has been grown with the greatest possible care to ensure accuracy. The proprietors are practical and experienced nurserymen, and wholly devoted to the business;—all the important operations are either performed by themselves or under their immediate inspection.

Experience has fully proved that the trees grown at this point, in addition to being free from diseases, are better adapted to cold climates than those of any other portion of the United States.

The collection of Apples includes several thousands of the famous new American Apple, the "Northern Spy."

A large assortment of Pears of the choicest kinds, are propagated on quince stocks for Dwarfs and Pyramids, and will bear the first or second year after planting; they are admirably adapted for Garden culture. A lot of these are now on hand, of extra size for immediate bearing.

The collection of Ornamental Trees is large and fine, comprising several hundred of the Paulownia Imperialis. The catalogue of Roses embraces the most popular new varieties. A great variety are propagated for Standard or Tree Roses, 4 to 6 feet high, with fine heads.

Of Double Dahlias the assortment is unsurpassed, including the finest show flowers yet introduced to this country, and many that were imported last season at 5 guineas each, of which a separate catalogue will be furnished.

The stock of Green House Plants is very extensive, and includes the most beautiful new Pelargonium (Geranium.) Fuchsia, Camellia, Calceolaria, Verbena, Cactus, &c., &c., all finely grown, and will be sold at greatly *reduced prices*.

Trees and Plants packed in the best manner, and shipped to any part of the country agreeable to order.

A new edition of our descriptive priced catalogue will be published this month, and sent gratis to all *post-paid* applications. Orders from unknown correspondents should be accompanied with a remittance or reference.

ELLWANGER & BARRY.

Rochester, Oct. 1, 1846.—1t.

KENDALL'S CYLINDER CHURNS.

THE following in relation to the above churns, from a firm in Vermont, who purchase of us, will show in what estimation the cylinder churns are held.

"We wrote you a few days since, to forward three each of the two smallest size churns. Please send us immediately six each of three sizes. Churns are getting in good demand. Our people think there is quite a saving when they can fetch the butter in two minutes, instead of churning two hours with the old fashioned churn. The Kendall churn is getting to be all the go.

The above churns are always for sale at wholesale or retail, at the Albany Agricultural Warehouse, No. 10 Maiden Lane, and 23 Dean-st. LUTHER TUCKER

WIRE CLOTH SEIVE AND SCREEN MANUFACTORY

THE subscriber has constantly on hand a large assortment of the above articles, which he offers at the lowest market prices. D. L. CLAWSON.

July, 1846—10 mos. 191 Water-st , New-York.

P. S.—All kinds of wire work manufactured to order.

FOR SALE.

A FEW fine Paular Merino sheep for sale, bucks and ewes; say about 50 ewes from four to six years old, and 40 to 50 buck lambs, that are nice, and of a large size, and 6 or 8 bucks that are from one to four years old, all in fine order.

JOSEPH I. BAILEY.

Newport, Sept. 1, 1846.—3t.

COMMERCIAL GARDEN AND NURSERY, OF PARSONS & Co., FLUSHING, NEAR N, Y

THE proprietors of this establishment are constantly increasing their stock which now covers nearly seventy acres of ground, and includes every desirable variety of Fruit and Ornamental trees, Shrubs, Roses, Vines, &c Their possession of specimen grounds for the testing of every variety of fruit they cultivate, affords them increased facilities for the attainment of correctness. They would also call attention to their large assortment of Foreign Grapes, some seventy varieties of which they are fruiting under glass.

To venders and those who purchase in large quantities, liberal discounts will be made Catalogues can be obtained gratis of Parsons & Lawrence, 10 Pine st; of A. B. Allen, 187 Water st., or of the proprietors by mail.

Sept 1.—3t. [1]

A GOOD FARM N AUBURN FOR SALE.

THE subscriber offers for sale the farm on which he now resides, in the village of Auburn, Cayuga county, consisting of 152 acres of good grain and grazing land, well enclosed and watered, and upon which are one large, and three moderate sized DWELLING HOUSES, Carriage Houses, Barns, Sheds, and other necessary out-buildings, three Apple Orchards, a great variety of choice Fruit Trees and Shrubbery, four durable Springs, three wells, two hundred rods of full stone fence, and an inexhaustible QUARRY of a superior quality of grey and blue me stone, suitable for cutting and dressing, eligible and convenient for a continued sale of that article, either rough or hewn, according to the demand, and from which most of the elegant stone buildings in Auburn were erected.

This farm extends from North-street to and across State-street, with a front of eighty-six rods on the former and one hundred and sixteen rods on both sides of the latter—upon either of which may be advantageously sold a great number of village lots, at the pleasure of the owner. About 22 acres, including the large house, barns, sheds, two orchards and garden, lie between North-street and the Auburn and Syracuse Railroad; 65 acres, including the stone quarry and one dwelling house, lie between said Railroad and State-street, and the remaining 65 acres, with two dwelling houses, lie west of State-street—all which is in a high state of cultivation, well fenced, conveniently allotted, and in good order. The whole farm, or either of the above parcels, will be sold cheap, and if desired, time will be given for the payment of a large proportion of the purchase money.

Inquire of Luther Tucker, of Albany, Hulbert & Hall, of Auburn, or the subscriber upon the premises. GEO. B. CHASE.

Auburn, Sept. 1, 1846—4t.

PATENT PREMIUM FAN-MILLS.

I. T. GRANT & Co., still continue to manufacture the celebrated Improved Patent Fan-Mills, at the old stand, Junction, Rens. Co., N. Y. These mills have taken the *first premium* at the following places:—New-York State Fair, at the Institute New-York, the State Fair at Pennsylvania, and the State Fair at Maryland. The subscribers have no hesitation in saying that these mills surpass anything of the kind ever offered in market. They are the only mill that has ever been produced that will chaff and screen wheat perfectly clean in one operation.

We also manufacture *Grain Cradles* of the very best quality, which have taken the first premium at the New-York State Fair. They are for sale at factory prices, at the following places:—

A. B. Allen's, 187 Water-st., New-York;
D. L. Clawson's, 191 " "
Luther Tucker's Ag. Warehouse, Albany;
H. Warren's, Troy; and
Viall & Warren's, Mechanicsville, Saratoga Co., N. Y.

All orders thankfully received and punctually attended to. All goods delivered at Troy, N. Y., free of charge.

I. T. GRANT, &Co., Junction P. O., Rens. Co., N. Y.

Feb. 1—tf [2]

FINE WOOLED BUCKS.

THE subscriber has had left in his charge, several bucks which are a cross between the Saxon and Merino varieties. They are two years old, of good size and form, and their wool, both in quantity and quality, would be found satisfactory. Further information given on inquiry. SANFORD HOWARD.

Cultivator Office, Albany, Sept. 1, 1846.

GUANO.—200 tons, the balance of the ship Shakspeare's cargo from Ichaboe, in tight casks, for sale in lots to suit purchasers, by E. K. COLLINS & Co., 56 South-st.

The many experiments made this season from this cargo, not only prove the great gain in using it, but that it is at least equal if not superior to any other guano

Sept, 1, 1846.—tf

WOOL.

LIBERAL advances will be made by the subscriber upon wool consigned for sale, or shipment to England.

HAMILTON GAY,

July 1—3t. 53 South-street, New-York.

FRUIT TREES.

THE subscribers would respectfully call the attention of the public to their assortment of FRUIT TREES. They are enabled this fall to offer a choice collection of many of the most esteemed varieties of Apples, Pears, Cherries, Peaches, Plums, &c., &c., &c. The assortment of trees having been considerably increased, persons desirous of obtaining articles in the nursery line, will find it worth while to examine the collection previous to purchasing elsewhere. All of which will be offered at very reasonable prices for cash.

N. B. All articles intended for distant transportation will be carefully packed the expense of the purchaser and delivered free of cartage to any part of the city.

WILSON, THORBURN & TELLER.

☞ Orders sent to Wm. Thorburn, Seedsman and Florist, 492 Broadway, Albany, will receive prompt attention.

Sept.1—3t.

TO WOOL-GROWERS.

THE subscribers have a tract of land lying Patrick Co., Va., consisting of about *ten thousand acres*, which they wish to sell or rent. It has on it immense quantities of the largest timber, with abundance of water, and water power. A portion of the land has been cleared, and produces the finest grass in the world. We would ike to dispose of it, or to enter into partnership with any gentleman who would furnish a flock of sheep, and go into the business of growing wool. Apply by letter to either of the subscribers, at Cumberland Court House, Va., or in person to Col. A. Staples, Patrick Co., Va., who will show the land.

WILLIAM W. WILSON
Sept. 1—6t. WILLIS WILSON

VALUABLE FARM ON STATEN ISLAND FOR SALE.

THE well known farm of the late Samuel Akerly, M. D., situated on the South side of Staten Island, in the town of Southfield, Richmond county, in consequence of the decease of its late owner, is now for sale. It contains 125 acres, 25 of which are woodland: is in a high state of cultivation, and we stocked with a variety of fruit trees. The house has been recently enlarged—is ample and commodious; the barns are new, and the farm is in good fence. It has a wide front to the water on a bay which abounds with the best kind of salt water fish, also with clams and oysters, all easily procured fresh from their native element. The experience of a long course of years, for the main part of the dwelling house has stood for more than century, has demonstrated that the situation is perfectly healthful.

The late owner, Dr. Akerly, died in July last; he had cultivated the farm for a number of years with great assiduity and care, keeping a daily and most minute register of the precise amount of labor and cultivation bestowed on each field, and noting many important observations which would be highly instructive and useful to the future owner The purchaser may be furnished with a copy of this diary.

The site of this farm is extremely beautiful—the approach to it from the main road is private road of about half a mile in length, running mostly through a piece of woodland, consisting of young timber of vigorous growth. After the visitor has travelled on this road about one-third of a mile, there opens upon him a prospect which takes in the low land, comprising the cultivated part of the farm—the placid and bright bay which separates Staten Island from Monmouth county, N. J.,—the highlands of Neversink, with the two lighthouses erected thereon—the lighthouses on and near Sandy Hook, together with the one at Prince's Bay, including the west end of Long Island. All the vessels employed in the commerce of New-York with foreign countries may be seen as they come in and depart, from the dwelling house and several other points on the farm.

The late owner, Dr. Akerly, who was born and educated in this city, after extensive examination and inquiry for a farm to which he might retire, on account of impaired health, selected this spot, to which he removed in the year 1839. Here he sought health and quiet retirement, and found them, until the day before his decease. He became exceedingly attached to the farm as a residence, and would have most reluctantly exchanged it for any other residence whatever. Such were its attractions that he never left it a single day, in winter or summer, but with regret.

For further particulars apply to HIRAM KETCHUM, Executor, No. 31 Wall st., or SAMUEL BOWNE, No. 83 John-street.

July 1, 1846.—3t.

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ALBANY AG. WAREHOUSE.

DISSOLUTION.—The co-partnership heretofore existing between the subscribers, under the firm of E. COMSTOCK & Co., is this day by mutual consent dissolved. The affairs of the late firm will be settled, and the business continued by LUTHER TUCKER.

Albany, Sept. 9, 1844.

ELON COMSTOCK.
LUTHER TUCKER.

It will be seen by the above notice that the subscriber has become sole proprietor of the *Albany Ag. Warehouse.* Not wishing to devote his personal attention to the business, he desires to dispose of the establishment, and will sell the stock on hand on such terms as will make it an object for a person disposed to engage in the business in this city.

LUTHER TUCKER.

FARM WANTED.

A GENTLEMAN is desirous of purchasing a farm, capable of being occupied strictly as a STOCK FARM, sufficiently near some railroad communicating with the Erie Railroad to facilitate the transportation of stock to market. It is wished that the farm should be situated in a healthful district, with pleasing scenery, and in the immediate vicinity of water, and having a house capable of accommodating a gentleman's family. The soil, and all the appurtenances of the farm, should be such as would yield the owner a good return for his investment. Applications, (*paid*) may be addressed to Box 2031, New-York Post-Office.

Oct. 1—3t.

IMPORTED THOROUGH BRED SHORT-HORN BULL, YOUNG FORESTER.

WM. ATKINSON offers the above named bull for sale, and any gentleman wishing to improve his breed of stock, will find this a most seasonable opportunity of doing so, as Young Forester possesses in an extraordinary degree the splendid qualities for which the Short Horns are so justly celebrated.

He is four years old, his color is a rich roan, his symmetry is perfect, his pedigree unrivalled, and he was bred by one of the most famous breeders in the north of England. It is also worthy of remark, that at the several shows in the province of Canada at which he has been exhibited, he has invariably taken the first premium of his class.

Letters (pre-paid,) addressed to WM. ATKINSON. Guelph, Canada West, will meet with immediate attention.

Oct. 1—3t.

HOVEY'S PATENT SPIRAL STRAW-CUTTER.

THESE machines are thought to excel all others for cutting hay, straw, or corn-stalks. The knives being supported by wings cast on the cylinder, are rendered sufficiently strong to cut the largest corn-stalks with great ease and dispatch, and as the knives are regulated by set-screws, it gives them a great advantage over all other cylinder cutters. There are other cylinder cutters the knives of which are fastened with rings at the end without wings to support them, and on such cutters the knives are wholly unadjustable, except with keys or wedges, the use of which is thought to be an infringement on the rights of Mr. Hovey. The prices of these machines are, for No. 1, $10; No. 2, $12; No. 3, $15; No. 4, $20. For sale at the ALBANY AG. WAREHOUSE, 18 Dean-st., and 11 Maiden Lane.

FOR SALE.

A FEW South Down Rams and Ewes; also Cotswold Rams and Ewes—for sale by the subscriber.

JNO. McD. McINTYRE.

Albany, Sept. 22, '46.—2t

AMERICAN HERD BOOK.

CONTAINING pedigrees of Short Horn cattle, to which is prefixed a concise history of English and American Short-Horns, compiled from the best authorities; by Lewis F. Allen. This valuable book contains the pedigrees of about six hundred cattle and it should be in the hands of every breeder of Short-Horns. A few copies for sale at the Office of the Cultivator.

Oct. 1—3t.

FARM FOR SALE.

A GOOD farm of eighty-two acres, situated in the town of New-Haven, (Oswego Co.) twelve miles east of Oswego village. Said farm is well adapted to grain and the different grasse . It is pleasantly located, well watered, and buildings in good repair, with plenty of excellent fruit. It is within three miles of the village of Mexico, which affords facilities for manufacturing, the various mechanic arts, &c., &c.

For further particulars inquire of the subscriber, living on the premises, or of Dr. B. E. Bowen, of Mexico.

ALPHEUS HERBERT.

New-Haven, Sept. 1, 1846.—1t*

THE ROCHESTER NURSERY—BY S. MOULSON,

CONTAINS a splendid collection of fruit trees, the Northern Spy, St. Lawrence Apple, and most of the new varieties worthy of the notice of connoisseurs, together with the most approved kinds of Cherries, Plums, Pears, &c. Also Hardy Shrubs, Evergreens, &c. Orders respectfully solicited. Trees packed suitable for long distances when required. Six to twelve months credit given for approved notes on interest. S. MOULSON.

Rochester, Oct. 1, 1846—1t.

AGRICULTURAL WAREHOUSE.

183 *Front-st., New-York.*

THE subscriber offers for sale an extensive assortment of Farming and Gardening utensils, consisting in part of plows of Freeborn's, Minor's, Horten & Co.'s, Prouty & Mears', and Ruggles, Nourse & Mason's patterns. The Locked Coulter, and Wrought Share Plow.

Corn Shellers, Fanning Mills, Grain Cradles, Corn and Cob Mills, Straw Cutters, of Greene's, Hovey's, Eastman's, and other most approved patterns.

Horse Powers, Threshing Machines, &c. Gin gear, Mill, Horse-power, and all other castings, constantly on hand. Also a general assortment of Brass, Copper, and Iron Wire Cloth, for Paper, Rice, and other mills. Seives, Screens, Riddles, &c., &c.

Persons ordering articles from the subscriber may depend upon having them made of the best materials and in the most workmanlike manner.

JOHN MOORE.

New-York, Oct. 1, 1846—1t*

PRINCE'S LINNÆAN BOTANIC GARDEN AND NURSERIES,

Flushing, near New-York.

W. R. PRINCE & Co. offer for sale their unrivalled collection of FRUIT AND ORNAMENTAL TREES, &c. The entire Fruit Department is carefully scrutinized by them personally, and ingrafted from the largest collection of bearing specimen trees in the Union, and they challenge a comparison in accuracy with any establishment in America and Europe. Purchasers are solicited to inspect their trees, and witness their superiority in size and vigor. The pre-eminence claimed can be readily tested by sending duplicate orders to them and to any other nursery. They have 3.000 extra sized pears, on pear and quince, 8 to 12 feet high, with heads, very strong, and suitable for immediate bearing, and 20,000 pears, 5 to 8 feet, and 5000 for dwarfs or en quenouille.

Also—Plums and Apricots, on plum of the same sizes, and a large stock of the finest Apples, Ceerries, and Peaches, the latter very low, by the hundred or thousand. 10,000 Quinces, 3 to 6 feet. 5,000 Lancashire Gooseberries, assorted. Victoria and other currants Fastolff, Franconia, and other Raspberries, at low rates. Of Grapes, the assortment comprises all the most celebrated and carefully selected foreign varieties for the table, and 40,000 vines of the best American varieties for vineyards and the table.

The collection of Roses is the largest in the Union, and comprises 80.000 plants, of 1,600 varieties, embracing every novelty that could be selected from ten of the largest collections in Europe, and the plants are much larger than are usually sold. 10,000 Magnolias, 3 to 10 feet; 50,000 Evergreen Trees, of every class and size. 50,000 Hawthorns and Privets, for hedges, and 70,000 Honey Locusts; 60,000 Large Dutch Asparagus, and 5,000 Tobolsk, Victoria, and Leviathian Rhubarb.

Of Ornamental Trees, they have above 200,000, of every size and class, including 5,000 Paulownia Imperialis, 6 to 15 feet, at $1 each, anp those of 6 feet at $6 per dozen.

The purchaseas may save two years by the superior size of their trees and shrubbery.

☞ Priced Catalogues of all, including a new Catalogue of all the Roses, at reduced prices, and a supplemert catalogue of the new varieties oi Fruit and other trees and Plants, and of the extra sized Pears, Plums, &c., will be sent to every *post-paid* applicant.

WILLIAM R. PRINCE & Co.

Oct. 1, 1846.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND. SERIES.

VOL. III. ALBANY, NOVEMBER, 1846. No. 11.

THE CULTIVATOR

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LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

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☞ "The Cultivator" is subject to newspaper postage only. ☜

MR. HORSFORD'S LETTERS.—NO. XIV.

……

ANALYSIS OF PEAT ASHES.

……

Giessen, July 27, 1846.

MR. TUCKER—I send you below a peat ash analysis, which I recently made at the request of Baron Von Liebig. This ash is sold extensively at Opladen, and enjoys a high reputation as a manure:

Peroxide of Iron,	7.84
Alumina,	9.73
Lime,	4.58
Magnesia,	0.29
Potash,	2.45
Chloride of potassium,	0.36
Sulphuric acid,	3.58
Soluble silica,	21.24
Sand and traces of coal,	51.15
	101.22

A glance at its constitution, and a recollection of the doctrines of the Giessen Professor, will at once explain its utility. The alumina is doubtless due to the soil gathered up with the turf. The absence of phosphates might have been expected in the ashes of plants where seeds are invisible and which form no part of the food of animals or birds. The potash and gypsum, sulphuric acid and lime, are in good proportion. But the soluble silica is immense.

When it is remembered that the stalks of grasses and grain need silica in order to their strength—in order to their standing erect—and how much of grain that would otherwise be an excellent crop, is lost because of its want of support when the head should be developing, it will readily be seen how such an ash may be valued as a manure.

A friend of mine, assistant to Prof. Will, has been employed by a Prussian agricultural society to analyze six varieties of soil—for each of which he is to receive 30 florins, or $72, for the whole. The labor will occupy him some three or four months, and in the end will be scarcely of any value whatever to those who employ him. Not because his work will be indifferently performed,—for he is an excellent chemist,—but because it would be unjust in the next year to base farming labor upon the analysis of soils gathered last year.

His method is the following: He makes a combustion in oxide of copper, and another in soda-lime, to determine the organic matters and ammonia. Treating the whole with water he analyses the soluble products. Then with nitric acid he analyses what is soluble therein, and then melting with baryta, he determines the absolute amount of potash and soda. To one familiar with the conditions of the problem, it will be seen that anything short of the course he has proposed to himself, would leave questions unanswered to which chemistry might have replied.

A soil is composed, exclusively of the decayed organic substances, of the rock crust of the earth, more or less pulverized. This crust was originally granite, or hypersthene, or basalt, or trap, or some other unstratified, or mixtures of two or more of these rocks. The sedimentary rocks are fragments of previously formed masses of greater or less fineness, and containing more or less remains of organic forms. A mixture of both with mouldering animal and vegetable matter makes the arable land of our fields. The inorganic materials are every day becoming finer and finer. Cold and heat, moisture and dryness, carbonated water, animal and vegetable life, and other instrumentalities are combining to reduce the larger to lesser masses; of these there are all dimensions. Some are fine enough to be dissolved—others that will reach this condition in the coming fall, others that will be soluble in another year, others in ten years.

Of these pure water will dissolve some—the carbonates of soda and potash, and the salts of ammonia: carbonated water others—the phosphates of the alkalies and alkaline earths: muriatic acid still more—the other compounds of lime or magnesia, the alumina, the iron, and some of the silicates: nitric acid still more; and melting with baryta will bring all the silicates into a soluble state. Only those portions soluble in carbonated water are immediately available for crops. Those soluble in muriatic acid and not soluble in carbonated water, may become available next year; and portions of those now requiring to be melted with baryta in order to their solubility will ultimately become finer and finer, and at last soluble in muriatic acid, and then in carbonated water—that is to say, more or less—for some of these compounds resist the agencies that ordinarily act upon rock masses.

Now all this laborious process is gone through with for earth from one cubic foot of soil, while every other cubic foot in the field may differ from it; and it reveals only the present condition, not what it may be a short time hence. The frosts and rains of the coming fall and winter will spring apart the larger pebbles, or eat away their irregular angles, and other ingredients will be presented, while those now soluble will have been taken up by plants or washed away by rains. Again, the most important ingredients are usually in the least proportion—the potash or soda—the gypsum—the phosphates and the soluble silica—constitute usually but a fraction compared with the sand, alumina, and iron; and the former are frequently present in sufficient quantity for the full development of vegetables without their having been recognized. Soils of West India cane plantations have been analyzed in Great Britain without potash being found in them—though this ingredient is present in the ashes of the cane plant.

What shall be done then to learn the capacities of a soil? Liebig has proposed to observe the weeds or plants which naturally grow there, and finding those which flourish and come to maturity—examine the table of ash analyses—comparing this table with that of a wheat, or oat, or corn, or barley analysis—straw and grain—some idea of its capacity may be justly derived.

This idea makes the subject too simple to be received for a time. Still it will gain ground, as has the view of the essential importance of mineral manures, until some of the most earnest wishes of this laborious chemist are realized to the agriculturist and the world.

Respectfully yours, E. N. Horsford.

COLMAN'S EUROPEAN AGRICULTURE.—PART VII.

••••••

This number opens with a continuation of the subject of "Tile and Pipe Draining," followed by chapters on "Subsoil-Plowing connected with Thorough Draining," "Irrigation," "The Rotation of Crops," "Soiling, or House Feeding," and "Crops."

Mr. Colman is of the opinion that the thorough draining and subsoil plowing of the land, constitute the "great modern improvement of English husbandry," and that "they seem destined to increase the products of the country beyond any calculations which have yet been made."

In relation to the application of these practices to the United States, he thinks there can be no doubt that in many situations, especially in the older states, they would prove highly beneficial. He says—"I know many farms and many tracts of country, where by such a process, the product of the land might be expected to be doubled, and I have a confident hope that, in many parts of the country, where wheat is now liable to be thrown out by the severity of the frost, or to suffer blight from the wetness of the soil, to which, in many cases blight is to be attributed, we may, by means of this great improvement, be enabled to grow wheat with success. Our crops of potatoes, which we generally plant by preference in low lands, are often destroyed by excessive wetness arising from heavy rains, which remain on the top of the soil, for want of ready and sufficient drainage. I have known, in repeated instances, the seed to be destroyed in the spring; and the crop in the autumn to be rotted, in such cases after it had become ready for the harvest."

The objections to this improvement in this country, are, 1st, the liability of the clay pipes used in draining to be broken by frost. This objection Mr. C. proposes to obviate by "laying three feet of the ends of the drains with broken stones, through which the water would find its way." He thinks pipes or tiles laid three feet, or even two feet under ground, would not be affected by the frost.

The next objection mentioned, is "the difficulty of finding suitable persons to execute the work." It is all important that a system of draining, if commenced at all should be well executed, and as yet "a class of skilful, scientific, and experienced drainers can scarcely be said to exist among us." Time and demand, may, however, it is added, "soon produce them." It is remarked, also, that it would not be easy to find laborers to execute the work. "No native American laborer," says Mr. C., "among the thousands I have known or employed, would have had patience, application, perseverance, and constancy, sufficient to execute drains after the perfect and scrupulously exact manner in which they are made in England." Mr. C. says, "our habits of haste, our habitual conceit of our superior judgment, &c., are national peculiarities which operate against any minute, precise, and exact labor."

The great objection, however, which will be urged against such improvements, Mr. C. thinks "will undoubtedly be the want of capital and the expense." He gives no positive opinion on this part of the subject; but remarks that in England, with scarcely an exception, so far as he has seen, the improvement is sure to be remunerative in a very high degree; "and for that reason," he continues, "the government are proposing a most beneficent measure in offering the loan of capital upon adequate security, for the accomplishment of such improvements, and in other cases allowing the owners of entailed estates to raise a certain amount upon the mortgage of such estates for the same purpose. He adds that where such improvements have been judiciously effected in this country, though they have generally been on a very limited scale, the result has afforded an ample compensation.

The extent to which drainage is carried on some large estates in England, is almost surprising. The Duke of Portland, it is said, had sometime since completed more than 7000 miles of drainage on his estates. The Duke of Bedford informed Mr. Colman that he made about 200 miles of drainage on his estates in a year, besides about 50 miles in his park grounds. Lord Hatherton at Teddesley Park, whose estate Mr. C. had more than once visited, had some years since completed the drainage of more than 467 acres, at an expense of £1508, 17s. 4d.; and had increased the rental of his land, by these operations, to the amount of £435, 2s. 4d. per year, or at the rate of 29 per cent. upon the capital expended. But such is the rapidity with which agricultural improvement is advancing in England, that, as Mr. C. states, "draining fully as efficient as the above, is now reduced to one half of the expense."

In view of the many examples of agricultural improvement which Mr. Colman has witnessed, he subjoins some excellent moral reflections. He says—"it is truly delightful to witness such an application of wealth; and the benevolent mind is never more disposed to envy the possession of power, than when it is thus beneficently exerted." He admits that the erection of costly mansions and palaces are in some degree useful, by circulating a large amount of wealth where it is needed—that "there is a pleasure in contemplating the skill and architectural taste displayed in their structure, the beauty of their arrangements, and the luxury and splendor with which they are adorned and finished. But often," he continues, "they are mere monuments of vanity and display; they are a serious draw-back upon the resources of the proprietor; they are much beyond his wants and convenience; they involve a necessity of a style of living which sometimes brings with it as much vexation as pleasure."

On the other hand—"how different are the results of the application of wealth to the purposes of agricultural improvement; in converting land which is waste into that which is productive; in the employment of the poor in useful and healthful labor; in increasing the means of human and brute subsistence; in advancing the real wealth of the community; in the actual creation of wealth without loss or injury to any one; in making improvements which have in themselves a reduplicative energy, so that the more improvement is made, the more the power of improving is extended and enlarged; in exhibiting an example of skill and success which excites no ill-will, because it injures no man's interest, but is everywhere beneficial, and prompts to a wholesome emulation; which leaves behind it not traces drawn in the sand to be obliterated by every wave that rolls upon the shore, but which are to endure for generations and centuries to come; and which in truth constitutes one of the most honorable and enduring monuments which a reasonable and well disciplined ambition of posthumous reputation and fame can desire or seek after!"

The "Process of Draining," which Mr. Colman describes with considerable minuteness, and in a plain and clear manner, we have not room to give, but must refer those particularly interested to his own language.

But it is "Thorough Draining in connection with Subsoil-Plowing" that Mr. Colman thinks productive of the most beneficial results.

"Subsoil-plowing," he says, "is never to be recommended without first draining, unless in cases where the lower soil is extremely loose and porous, so that the water can pass immediately off. The late Mr. Rham, a distinguished farmer, attempted this upon an adhesive soil, but found that, to use his own expression, it held water as a sponge, and became quite unmanageable until he proceeded completely to drain it with tiles. 'Until there is an escape for the water through the subsoil, any opening of it but provides a greater space for holding water, and will rather tend to injure than improve the soil.' "

"Results of Subsoiling and Draining.—The improvements effected by the process of thorough draining and subsoiling have been most remarkable. The manager of the farm of Sir Robert Peel says, 'that he can confidently state that the crop of turneps, after the above treatment, was four times the quantity in weight ever produced in the same field at any previous time.' Mr. Smith says in an early treatise on this subject, that when land has been thoroughly drained, deeply wrought, and well manured, the most unpromising, sterile soil becomes a deep, rich loam, rivalling in fertility the best natural land in the country, and from being fitted for raising only scanty crops of common oats, will bear good crops of from 32 to 48 bushels of wheat, 30 to 40 bushels of beans, 40 to 60 bushels of barley, and from 48 to 70 bushels of early oats, per statute acre, besides potatoes, turneps, mangel-wurzel, and carrots, as green crops, and which all good agriculturists know are the abundant producers of the best manure."

Mr. Smith also states that when he commenced operations on his farm, the soil of a part of it was not more than four or four and a half inches deep, but since he has drained and subsoiled it, he can turn up sixteen inches of good soil.

It seems however, that equal success has not attended subsoil-plowing in all cases. Where the soil is very adhesive and heavy, it soon runs together and becomes as impervious to water as it was before the subsoil had been stirred. Hence, thorough draining is essentially necessary in connection with the loosening of the substratum.

Subsoiling Light Lands.—Though some may be surprised that this system should be applied to light and sandy land, yet Mr. Colman states many cases of its beneficial effects have come within his own knowledge. He mentions the case of a man having 400 acres of sandy land which had been used as a rabbit warren. The surface was undulating, the swells being covered with heather, and the hollows with aquatic plants. The soil of the hills was a sterile sand, which had been heretofore cultivated and then abandoned. "About six or eight inches below the surface, this sandy soil seemed to become hardened into almost a sandstone, with the occurrence occasionally of an impervious bed of ironstone, presenting wherever it did occur, a complete obstacle to the entrance of the ploughshare." After this land had been thoroughly subsoiled, it yielded over 80 bushels of oats to the acre, and when the account was written, had a beautiful crop of wheat growing on what had been the worst portion.

Under the head of Irrigation, Mr. C. gives some interesting facts, to which we may refer hereafter. He mentions that great pains are now being taken in the vicinity of all the cities and large towns, to save the water of the sewers and apply it to the soil. Instances are given which show that such liquids have produced a very fertilizing effect—the lands to which they were applied yielding the most bountiful crops. The application of urine to lands is also becoming quite general in England, and the best means are being adopted for saving and using it. The example of Mr. Dickenson, who keeps 150 to 200 horses, in London, is cited. The urine of the horses is conveyed by channels into a tank, and is from thence emptied into a watering cart by a pump. About five miles from London Mr. D. has a farm, to which all the urine is carried and distributed, by means of a watering-cart, on the growing crops. Before it is used, however, it is mixed with water in the proportion of one part of urine to two parts water, and about 1100 gallons of urine and 2200 gallons of water are used per acre. It is applied mostly to grass land, and is put on immediately after the crop has been cut. The kind of grass cultivated is mostly Italian rye grass, of which at the time of seeding, (autumn,) four bushels were formerly sown per acre, but with an improved sowing machine, two bushels only are now used, and yet the plants appear to be as thickly set as formerly, when by hand-sowing double the quantity of seed was given. Mr. D.'s soil is a stiff clay, which is mixed with rubbish gathered from the removal of old buildings. The produce of grass where the urine is applied, is worthy of note. It is stated that in 1844, the rye grass was mowed ten times.

First in March, when it was about ten inches high; April 13, a second time; May 4, a third time; May 25, a fourth time; June 14, a fifth time; July 22, a sixth time. "Immediately after each of these crops, the land was watered once from a London street water-cart, with one part of urine from the stables, and two parts of water, the produce of each crop increasing with the temperature of the atmosphere from three-quarters of a load per acre, as hay, to three loads per acre. The crop having shed a quantity of its seed, it was feared the urine might have injured its growing. It produced, however, three or four light crops afterwards.

"In 1845, his first cutting was on the 6th April; his second, 3d of May; his third, 9th of June. On the 22d of September, the fourth crop on the land measured three feet; the sixth crop, on land which had been previously mowed five times, measured one foot and a half."

At Mr. Colman's request, Mr. Dickinson took special pains to ascertain the exact yield of hay per acre. Of the fifth crop of the season, he cut a yard square, which was first dried twelve days in the open air, then dried three days in a room heated to 59 degrees, then three days in a kitchen at 70 degrees of heat, and lastly two hours before the fire. The weight of it at the close of the process, was 2 lbs. 6¼ oz., which, it is said, would give at the rate of about 5 tons 3 cwt. to the acre.

Mr. Colman thinks that in the neighborhood of cities, in the United States, a vast amount of urine might be collected, at small expense, and carried out by the neighboring farmers without offence to any body, and with very great public and private advantage. Mr. C. quotes from Liebig, that in a city containing 100,000 inhabitants, there is produced annually 24,440 tons of urine, sufficient to manure, by irrigation, 50,000 acres of land, and worth at least $60,000.

Soiling, or House Feeding.—Mr. Colman informs us that the practice of soiling does not prevail to a very great extent in England; but he says horses are almost universally soiled upon clover, rye grass, rye, vetches or tares, or rye and vetches sown together. The horses are frequently kept upon them without any additional feed; but when on the road, or when the farm work is severe, they require grain of some sort in addition."

"That a great saving of food is effected by soiling there can be no doubt; no one rates it at less than two to one; many say that three animals, some assert that four animals, can be well kept upon the produce of land, if soiled, where not more than one could be kept if depastured. The difference, undoubtedly, in this respect, is very great in favor of soiling; but its expediency upon the whole, in any given case, will be affected by a variety of local circumstances."

Mr. C. is of opinion, however, that the soiling of work horses and work oxen on a farm, is always to be advised. The reasons for this are, that they require the most particular superintendance, which can only be given them when they are near at hand; they should be protected against extreme changes of temperature which they are liable to suffer when turned at night into a pasture; they require to have their food prepared and brought to them, to give them opportunity for sleep and repose—a horse turned empty at night into a pasture, being obliged to pass a great part of the night in filling his stomach.

The great advantages of soiling are, however, deemed to be the increase of manure and the keeping of more cattle on the same land.

"The increase of manure from soiling is very far beyond what would be supposed by any one not experienced. Where proper provision is made for this purpose, all the manure of the animals is saved, instead of being left and scattered either on the road-side, or in fields, to be dried up by the sun or washed away by the rain; and it is at hand to be applied as the farmer shall choose. It gives him an opportunity of converting all his long litter and the straw of his farm into the most valuable of manures, by using it as an absorbent for a large amount of the liquid portions of the excrements of his cattle. It affords him likewise the power by properly constructed gutters and tanks, of saving his liquid manure—the best portion, if well managed, and, according to the estimation of many eminent farmers, compared with the solid portions of the manure, in point of value full two to one.

"The next great advantage of soiling is the increased stock which may be kept on the same land. From various facts which have come under my observation, where the soil is carefully and judiciously cultivated, and duly manured, and a proper rotation observed, I believe that on land under artificial or esculent crops, three animals may be soiled where one only is now grazed. I believe this may be done with equal or superior advantage to the health and thrift of the animals, and that in most cases, the increase of valuable manure will much more than pay for any extraordinary trouble of attendance.

"Another advantage is the saving of interior fences upon a farm. Where cattle are kept constantly in barns or yards, the necessity of enclosures is of course done away; and separate from the saving of expense in the case, the convenience of cultivating in long lines and open fields, the saving of land, and the superior neatness of the cultivation, are great and obvious advantages."

Mr. C. states that it has been determined by experiments which have been made in England, that of all food, grass fed green will produce the largest secretions of milk. "It is found, likewise, by experiment," he says, "that in order to the largest secretions of milk, the temperature in which the animal is placed must be comfortable; she must be free from external annoyances, and she must be 'at ease in her mind.'"

Mr. Skilling, the manager of the school farm, of Glasnevin, near Dublin, practices soiling, and Mr. Colman gives a sketch of his system. The animals are kept in houses or stables, which are well ventilated and kept perfectly clean. The animals are well curried and brushed every day. There is one particular person to superintend and pay attention to the feeding, "and one of the most important parts of his duty is, to ascertain the appetite of every beast. Cows, like other animals, will eat less or more, and they ought to be supplied according as they require it, being kept rather with an appetite than otherwise." After the animal has finished its meal, all the refuse is immediately taken away, and nothing allowed to remain in the manger before it. The cattle are fed at exact times. They well know the feeding hour and will be disappointed and fretted if neglected, and neglect is prejudicial both to milking and fattening. They should not be kept constantly to the same kind of food. "No matter how nutritious in itself, there ought to be a variety; a change, if possible, for every feed." He gives six feeds a day, summer and winter, beginning at six in the morning and ending at nine in the evening, viz: at 6, 8, 12, 3, 6, and 9. They get water in their stalls at ten in the morning and five in the afternoon, and are turned out for exercise from 10 to 11. The kinds of food are chiefly the following: In summer, at 6, perennial or Italian rye grass and clover; at 8, cabbages or leaves; at 12, cut hay and straw, (this being given to prevent the purgative tendency of the green food;) at 3, vetches; 6, mangel wurzel leaves, rape, or other refuse from the [illegible] or garden; at 9, clover or grass, or dry feed if the state of the bowels require it. In winter first feed with steamed food at 6; at 8 with turneps, raw; at 12, with cut hay and straw; at 3, with mangel wurzel, raw; at 6, with steamed food; at 9, with hay and straw. Mr. Skilling adds—"I have ascertained that when my present farm was in pasture, it pastured eigteen cows in summer; but now it feeds sixteen cows and three horses all the year round, and I have as large a portion of grain crops on the same land as most other people, besides."

Mr. Colman cites also the management of Mr. Blacker, the manager of Lord Gosford's estates, in the county of Armagh, Ireland, where very great improvements have been made, and the condition of the tenantry much benefitted, within a few years, by the introduction of the system of soiling.

In regard to the practice of soiling in the United States, Mr. Colman thinks it may be done with good advantage in some instances, especially in the older states, and that it would enable farmers to "keep three times the amount of stock they now keep, and to much more advantage with regard to produce and profit." "The great means of improving our farms," he adds, "are in the amount of stock which we keep upon them, always premising, however, that the stock to be profitably kept, must be well kept; and while every farfarmer loses who does not keep all the stock his farm will carry, he perhaps loses still more who keeps more stock than he can keep well. But every effort should be made by a good farmer to increase the capacities of his farm to their utmost extent; and by the number of cattle and sheep which he can amply provide for, may be determined his means of enriching his farm and enlarging the profits of his husbandry."

BREEDING CATTLE.

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[The following judicious remarks in relation to the breeding and management of cattle, are taken from the "American Herd Book," an able work lately published by Lewis F. Allen, Esq., a few copies of which are for sale at our office.—Ed.]

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To such as intend to breed cattle of decided excellence—and they, we hope, constitute all—we recommend them to select bulls of only *moderate size*, coupled with all the *fineness* of bone and limb, consistent with a proper masculine vigor and energy, coupled with *fullness* of carcass and *ripeness* of points; so as to embody *great substance within small compass*. In addition to this, let him be as deeply bred, that is, of as pure blood, and of as long ancestry (not depending altogether on the herd book for that, as many of the very best class of animals have comparatively short *herd book* pedigrees) as possible; and above all let him be descended of good milking stock, where milkers are to be bred in his progeny. Your cows we will presume are such as your opportunities have enabled you to procure, but of approved blood. If the bull selected *breed well to your cows*, have no fears of continuing his services to a second, or even a third generation of his own get. Such practice will produce uniformity, and uniformity is one great excellence. No matter for the color, so that it be within the Short-Horn colors. Above all things, avoid coarseness—looseness—flabbiness—and a general tendency in the animals to run their valuable points into offal. Such cattle, of whatever breed, are great consumers, bad handlers, light provers, tender of constitution, and unsatisfactory altogether. If you have an occasional production of this sort, transfer it to the shambles or elsewhere, with all dispatch. On the principle that "like begets like," which is an unerring law of nature in the long run with the presence of such in your herd, you will be perpetually afflicted with the production of animals which by hereditary descent, sympathy, and the thousand accidents springing from association, will be neither creditable to your good breeding, nor satisfactory to yourself.

Feed *well:* not lavishly. Your cows should be in good breeding and milking condition—nothing more and your bulls in fair working order. Such is the condition most consonant to nature, and promotive of the highest animal health. The scale of points laid down in our introduction, with the occasional remarks on the practice of breeders, as we have passed in our history, detail what a good animal should be. These, together with a close examination of the general figure of good cattle, as illustrated in our plates, will aid the judgment of the breeder. With a well-balanced judgment of his own, and a sound experience, they will be a safe guide, and he may go on his way rejoicing.

A single word to such, if any there be, into whose hands these pages may fall, as deride the value placed on superior cattle by their breeders, and such as know their real worth: Breeding *good* animals is a subject of great labor, and incessant care. Such labor cannot be bestowed for nothing. To breed successfully, requires skill,—talent,—research,—observation; and all of these of a high order. Let the breeding of our fine stocks fall into unworthy hands, and hardly a single generation of man will pass before the real lover and promoter of the matchless herds which now so proudly embellish many of our rural estates—a source of pleasure, of pride, and of comfort to their possessors—will mourn over their degeneracy, and which the time of another generation with great labor and constant solicitude would scarce suffice to reinstate in their former splendor and excellence. Talent and labor of this kind cannot be had for nothing; and without remunerating prices be maintained, the downfall of the Short Horns in America will sooner or later be at hand.

THINGS BY WRONG NAMES.

……

INSECTS are the greatest enemies to the crops of the farmer, and it is to be regretted that a more thorough knowledge does not prevail of their habits. Great confusion is made from wrong names being applied to insects, or from several species of very different habits being known by one name. For instance, one man gives a remedy for what he calls "the weevil;" the remedy is adopted by another man for an *entirely different* insect which he calls by that name, and the consequence is, as might be expected, the prescription proves totally useless.

In one section of the country, the wheat-midge (*Cecidomyia tritici*,) is called "weevil." The larva of this insect, a small orange-colored maggot, is found in the heads of wheat, between the chaff and kernel, and often does much damage to wheat while growing, but *not after it is harvested.*

Another insect sometimes called the "black weevil," (*Curculio granaria*, Linn.,) is injurious to wheat and and other grain in its dry state, or while deposited in granaries; but *does not injure the grain while standing in the field.* This is a coleopterous insect, and is a true weevil.

The grain-moth, (*Tinea granella*,) is also sometimes called weevil, in some sections. We presume it is this insect which at the south is known as the "white weevil," "fly weevil," "flying weevil," &c. This is totally different from the true weevils, as it belongs to the same family as the well-known clothes moth. [See Mr. OWEN's article, with cuts, on another page.]

This subject was brought to our mind by seeing an inquiry, in the *Massachusetts Plowman*, for a remedy against "an insect called a weevil." From the language used by the inquirer, we have no doubt that the insect he alluded to was the wheat-midge before spoken of, and not the weevil. He says—"my *wheat crop* was considerably injured this season by an insect called a weevil."

In answer to the inquiry, the editor of the *Plowman* gives an article written by a Georgian, in which it is recommended that grain affected by weevils, be spread in the sun, and the casks, in which it had been kept, heated over a bark fire. The article speaks also of remedies against the "white weevil," which he says, "attacks wheat only in large stacks, in houses when in the straw, and in the chaff after it is threshed."

The remedy of sunning the grain, &c., is evidently intended to apply to the *Curculio granaria*, and could be of no use whatever in obviating the attacks of the wheat-midge, popularly known as weevil in New-England and this vicinity.

The editor of the *Plowman* observes that so far as he knows, "the weevil has not proved very destructive to wheat-crops in Massachusetts; though in southern and western states great complaints are made."

The fact is, however, that an insect *called* weevil (as above described,) *has* "proved very destructive to wheat crops in Massachusetts" and over a large portion of the northern section of the country, though *this* insect is scarcely known in the "southern and western states," and it is not improbable that the author of the inquiry in the *Plowman*, and the writer referred to for a remedy, had each no knowledge of the insect to which the other alluded.

SAXON vs. SPANISH SHEEP.

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MR. EDITOR—In your August number, I noticed an article purporting to give the transactions of a meeting of wool-growers convened at Lowell, Mass., on the 1st day of July. I perceive by that article, that John Brown, of Akron, O., and Jacob N. Blakeslee, of Watertown, Ct., have entered into an arrangement for the purpose of testing the relative value of the fleeces of their sheep, and have agreed that Samuel Lawrence, Esq., of Lowell, shall be the umpire for deciding the case. I noticed, also, that the wool-growers throughout the United States are requested to "participate in this competition."

Now the object of this communication is to inquire:

1. Whether the inference is correct that the arrangement spoken of, is designed to test the value of the fleeces of Saxon sheep on the one hand, compared with those of Spanish, (or as commonly called, Merino) sheep on the other?

2. In determining what are Saxon and what Merino sheep, what will be the criterion? Will those only be considered Saxons which are descended *wholly* from stock originally brought to this country from Saxony? and those only Merinos which are descended wholly from Spanish sheep—that is, such as have not come, (either themselves or ancestors,) through Saxony?

3. Would an individual having sheep not wholly of Saxon descent, but intermixed with Merino, be allowed to compete with them against Merinos?

Answers to these inquiries would greatly oblige

A WOOL-GROWER.

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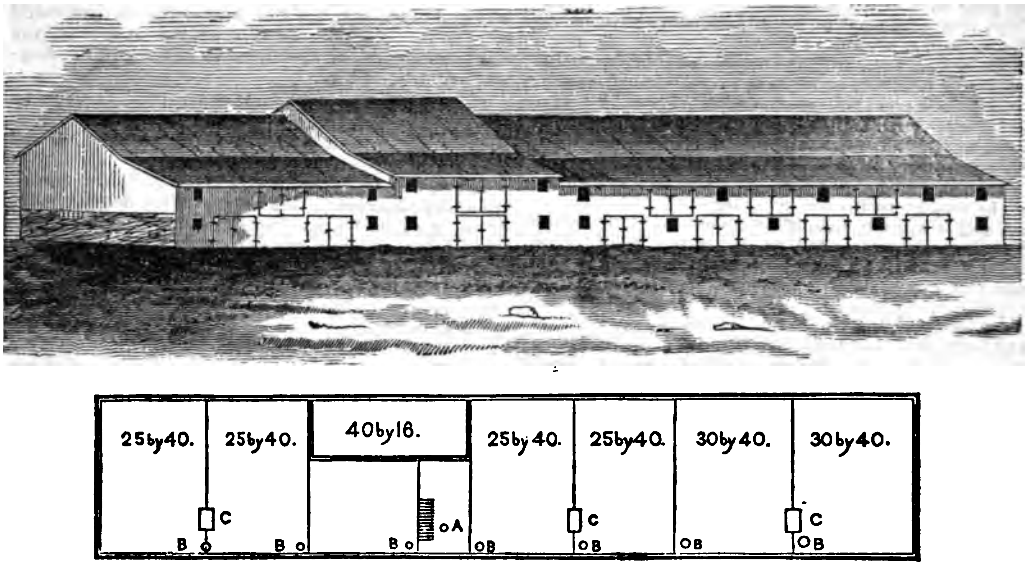
[Without presuming to give an *authoritative* reply to the above, we will just observe that from the tenor of the article referred to by our correspondent, (which we copied from the Lowell *Courier*,) it would seem that the arrangement spoken of was designed to test the comparative value of the fleeces of Saxon and Merino sheep. For example, the article states in the first place, that there was much discussion at the meeting between Messrs Brown and Blakeslee, as to the "relative properties of the Saxon and Merino sheep, and more especially of their fleeces;" and it is expressly stated that the arrangement was finally entered into for the purpose of "testing, and as far as could be done, settling the question of the relative value of these two important breeds of sheep." We must leave to Mr. LAWRENCE a more definite answer to "A WOOL-GROWER'S" queries.—ED.]

HENS.—Mr. Crocker of Sunderland, N. H., has kept a regular account of the expenses and profits of seventeen hens, showing the following expenses:—The hens, cost him in food for a year $10.78, while they brought him in eggs at 13 cents a dozen and chickens at 15 cents each, $27.25, making a balance in his favor of $16.97.



SHEEP BARN.—Fig. 94.

The above cut, (fig. 94,) represents the barn of Messrs. **Tilden**, of New-Lebanon, to which we referred in our September number. It is placed on the side of a ridge or elevation, and has a cellar under the whole of it opening to the south. It is about 180 feet in length by forty in breadth. The floors for the entrance of teams run crosswise of the barn, and are accessible from the rear, where the surface of the ground is nearly level with the sills. The ground of the cellar and yard is dry and gravelly. Doors and windows open from the cellars into the yard, which by being closed or opened, secure the proper temperature for the sheep, they being kept in the cellar and yard the whole winter. There are also windows in the rear and at the ends, so that there is no difficulty in having sufficient ventilation, and the sheep are not obliged to inhale an unhealthy atmosphere. Partitions or fences are made through the cellar and yard, as represented in the cut, by which a proper division of the flock is readily effected.

This barn originally consisted of several detached barns, which by removal and connection now form a very convenient whole. The general plan, however, has been improved on by some of the farmers in the vicinity; particularly by Mr. **Pierce**, who has a very well-made and convenient barn on this model. One great advantage of barns with cellars, is, the facility afforded for saving all the manure, particularly the urine, which is no doubt the most valuable portion. Mr. **Pierce** and Mr. **Tilden** both assured us that the manure which they took from their cellars possessed about double the strength and value, as proved by its effects, to that which was exposed in the ordinary manner.

It has been objected to barns of this construction, that the hay is injured by the exhalations from the cellars, especially where sheep are kept. We are confident that this is not a necessary objection. If the floor of the barn is made tight, and the cellar is properly ventilated, we presume no bad effect is had on the hay.

Description of the Figure.—A, well with pump; B, water tubs; C, boxes for hay 4 by 6 feet, directly under the trap-door, through which hay is thrown from the mow; (this prevents the sheep running into it before feeding, and also keeps the dust and seed out of the wool.) In one section of the barn is a shearing floor, 13 by 40 ft., and wool-room 14 by 18 feet. The space 40 by 16 is a cellar for vegetables, for winter feeding. Racks are [illegible] around the sides of each apartment.

We are indebted for the use of the cut to the publishers of "The American Shepherd," in which work it first appeared.

LABOR ACCOUNT.

Mr. Editor—The following is a plan of the manner in which I keep time of the amount of labor done daily by each person during haying and harvesting. I find it very convenient, more especially during rainy weather, when the hands do but part of a day's work. At night I set down the amount of labor done by each person.

1846. FIRST WEEK IN HAYING.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Total No. of days' work done by each person.
July 13.	13	14	15	16	17	18	
A. B., ...	1	1	¾	1	½	1	5¼
C. D., ...	1	1	1	1	1	½	5½
E. F., ...		½	1	1	1	½	4
G. H., ...			1	1	1	1	4
I. K., ...			1	1	1	1	4
L. M., ...				1	1	1	3
Second week— July 20.	20	21	22	23	24	25	
A. B., ...	½	1	1	1	1	¾	5¼
C. D., ...		1	1	1	1	½	4½
E. F., ...		½	1	1	1		3½
G. H., ...	1	1	1	1			4
I. K., ...	1		1	1	1		4
L. M., ...		1	1	1			3
Third week— July	27	28	29	30	31		

Wheeler, Sept. 10, 1846. O. F. **Marshall.**

Last week a case of preserved meat, taken from the wreck of the Fury, which was lost in the Frozen Ocean in Captain Parry's first voyage, about 20 years since, was opened by a gentleman at Brentwood, when it was found to be as fresh as the day it was packed, and when cooked was excellent.—*English paper.*

Plow stiff clay land in ridges, running the furrows in a direction to let off the water; the frost will make the soil friable.

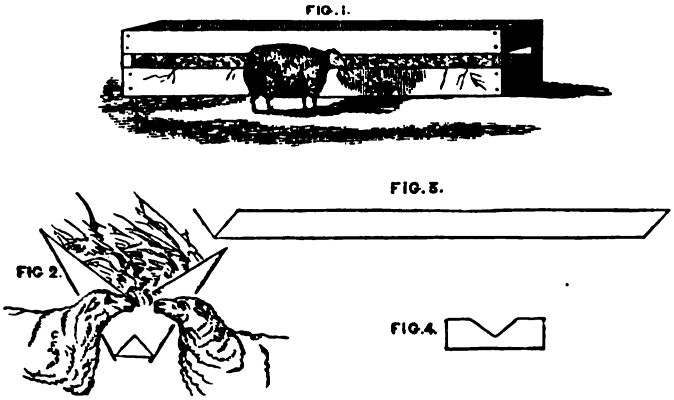


FIG. 1.
FIG. 2.
FIG. 3.
FIG. 4.

SHEEP RACKS AND TROUGHS.—Fig. 95.

THE above are figures of sheep-racks and troughs, which in our opinion are the best we have seen for their respective uses. They are from "The American Shepherd," where we find the following description of them:

Figure 1 is a model of those used by the writer, [Mr. MORRELL,] for many years. They cost but little, and little waste can result from their use; and are also light, and therefore easily removed, which is sometimes necessary whether feeding is done under cover or not. Where, however, the severity of the climate compels feeding wholly under shelter, the kind designated by fig. 2, appears admirably adapted for the purpose. The writer, however, never having used any of this description, cannot speak confidently whether their superiority is greatly over the other kind, and must therefore refer the reader to the remarks concerning them of several of his correspondents.

The upright pieces or posts of figure 1 should be of pine or hemlock scantling, 2 by 3 inches, and at least 2 feet 9 inches in length. The lower boards 12 inches in width, and the upper ten inches; the spaces between them 9 inches; the width of the rack 2½ feet. The most convenient length is about 12 feet, and if thus, 6 will be required for 100 sheep of the Saxon and Merino varieties, or grades of these, when full grown.

For lambs, the width of the lower boards may be reduced two inches, the top board not any, and the space between, less about two inches, the width of the rack four inches less, and the posts shortened three inches.

From the length of the posts, an allowance, it will be seen, is made for nailing the lower boards two or three inches above the bottoms of them, which is proper. Five racks, if each is 12 feet long, will be required for 100 lambs of ordinary size. There should be no crowding when eating.

The front and upper edges of the lower boards should be planed slightly, to prevent the wool from the breasts and necks of the sheep from being rubbed off. To secure the boards permanently to the posts, spikes should be used of sufficient length to clinch. Four spikes to each side and end board are necessary.

Figure 2. The most correct idea of the construction of this is given by the cut, which represents one sawed in two crosswise. Six pieces of three by four inch scantling, and 33 inches each in length are required for a rack. The shelving boards, as seen above the heads of the sheep, are of ¾ inch stuff, and 14 inches in width, and are very necessary to prevent hay seed and chaff from falling into the necks; and further, the hay, if pulled down faster than eaten, cannot waste, as it is saved by the troughs. The front board of the troughs should be 9 inches in width; the space for the heads of the sheep 10 inches; and from the top of the space to the end of the support, 14 inches. The triangles A, A, represent the troughs. This is a double rack, but on this principle they can be made single, and placed against the sides of the shelter. They are more expensive than the kind at first described, but have decided advantages for feeding within doors, as troughs are connected.

TROUGHS.—The boards of the trough (Fig. 3,) may be of hemlock, or pine; the former, however, are not only cheapest, but hold nails more firmly. They should be 10 inches in width, one inch thick, and nailed at right angles, or, simply the edges of two nailed together. A notch must then be sawed precisely to correspond with the flare of the trough into a two-inch pine plank, a piece of which 12 inches wide and 15 inches long constitutes the proper dimensions for the end pieces, or legs of the trough. (See end piece, fig. 4.)

SHEEP ON THE SOUTHERN MOUNTAINS.

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MR. TUCKER—As a further reply to the question asked by S. B. Buckley, p. 241 of the present volume of the Cultivator,—"Whether wool-growing will succeed in North Carolina or not?" I would say that it depends entirely upon the exertions used, as I am thoroughly convinced that the country and climate is altogether favorable. The objections raised by Mr. Buckley, if they existed in all the mountain region might be considered serious; but as they can only be offered against a few very high mountains, situated in the midst of many other mountains, and far from any level or plain country, such a hiding place as he speaks of, would not be such a place as persons raised in civilized or refined society would wish to settle in. The Roan and Black mountains, were selected by Mr. Thos. Clingman, because they were the most elevated and noted mountains in Yancey Co., and not, I presume, because he thought they would afford the best pasturage for sheep; if so he was mistaken. On those mountains and in their vicinity, are the finest grazing lands for cattle; and so there is in the low marshy land of South Carolina; but neither location is favorable for sheep. I agree with Mr. Buckley, "That a large portion of the county of Yancey is an elevated table land, which is so damp and cold that the inhabitants frequently do not raise corn sufficient for their own consumption." This is partly owing to the climate; but mostly to the character of many of the inhabitants of those sparsely inhabited regions, where they too frequently depend upon the success of the chase for the largest portion of their subsistence.

But if Mr. Buckley, or any other gentleman of observation, will come sixty miles farther south,—on the line of the Blue Ridge, into Henderson and Rutherford counties, about the Tryon mountain,* which is the first that he will ascend on rising up from the level country east of the Blue Ridge, along the Howard-Gap turnpike—high on the acclivity of the Tryon he will find a bench of land which possesses a very peculiar characteristic. At night, generally, there is a pleasant breeze, and for several miles along the mountain side, there is never any dew to be found, and it is very rare that they have frost except in winter; and when the whole country above and below is covered with sleet, along this mountain side there is none. Here grows the finest native grapes that I ever saw, and the fruit crop never fails. And here is grown the heaviest wheat and rye in all the country. Here the inhabitants have the first dawn of the morning sun, and persons unaccustomed to the view, fancy that they can almost see him coming up from the watery deep. On the eastern side of this mountain is the earliest pasturage in spring, and the latest in the fall that is found in the whole range of mountains.

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* This mountain was named for Gov. Tryon, who held office under the British crown, about the year 1773, when Tennessee and North Carolina were one state.

This location is about 46 miles E. S. E. from Ashville, and 20 miles S. S. W. from Rutherfordton. Here two of those ever persevering men from the north, called Yankees, have commenced to wall in a vineyard, and to cultivate the broom corn, for manufacturing brooms. They have the purest water that flows out of the earth; and around them are beautiful cascades more than a hundred feet high, and above them the toppling peak of the Tryon.

Thousands of persons throng this mountain region during summer to enjoy the pure bracing atmosphere, which on the eastern face of the mountain is dry and healthful; but farther back, in the mountains of the French Broad, there is much more dampness and heavy fogs; and if you still go west into Tennessee, the higher and thicker the mountains, and richer the soil, the more humid and unpleasant the atmosphere.

You may readily conclude that along the eastern slopes of these mountains, the climate and country is finely adapted to the growth of wool, as may also be seen by many of the fine flocks of native unimproved sheep, which wander here untended, regardless of wolves or dogs, their greatest enemies.

For two hundred miles along the eastern slopes of these mountains south, there are situations well suited for large flocks of sheep, and land is cheap. In many places it does not cost more than 20 cts. per acre, and very fair land may be had for 40 cents per acre.

But the stock is now being taken to make a railroad from the sea to the mountains, which will give great facility to trade and travel, and awaken new energy and enterprise in all this up-country. **Henry M. Earle.**

Pacolett, Rutherford Co., N. C., Sept. 21, 1846.

CULTIVATION OF CRANBERRIES.

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Mr. Editor—Permit me, through the Cultivator, to make some inquiries in regard to the cultivation of cranberries. I have a piece of marsh land which is covered with what I call water bushes, and is also considerably sprinkled with cranberries. I intend this fall to tear up the bushes by the roots, and if possible have the cranberries take their place. I should be glad to know—

1st. Which is the best way of getting the land well and evenly set with the cranberry plants? Should fruit or seed be sown broadcast, or plants set out?

2d. If sown broadcast, what quantity should be sown per acre, and at what time in the year should the work be done? bearing in mind that in spring the land is under water.

3d. Would it be better to give the muck a dressing of sand two or three inches in thickness, before seeding?

4th. How long will they be in coming into bearing from the seed?

5th. If plants are to be set, how far apart should they be placed? **B. P. Robbins.**

Springfield, Mass., Sept., 1846.

We should be pleased if some of our readers who are acquainted with the culture of cranberries would answer the above inquiries.—Ed.]

PLANTING NEW RESIDENCES.

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Every man who builds a new house on a new spot of ground, at the same time that he suits his taste, suffers the serious inconvenience for some years, of a want of large shade trees and of plenty of fine fruit. He must wait till the trees can grow; but if this period may be reduced to less than one-half its usual length, most men would certainly hail the means for its accomplishment with great pleasure. If fruit trees which often stand for ten or twelve years without yielding much, can be made to produce considerable crops in five, a great object would be attained. Having had some little experience in this matter, we propose to offer a few hints.

Trees should be set out as soon as possible after the ground is selected, in order that they may be growing. But nothing is gained by transplanting them before the ground is prepared for them. We have set out trees on land which had been simply plowed and made mellow, and where manure could not be well applied and intermixed afterwards by plowing and harrowing. The consequence was, that trees of the same size at the time of transplanting, set out two years afterwards on properly prepared land, outstripped the first in three years. In all irregular planting, or where horse cultivation cannot be afterwards constantly kept up, by the arrangement of the trees in rows, the soil should be previously prepared in the very best manner, by plowing and trench-plowing, and by the thorough intermixture of manure at the same time. The ground will be better fitted for the purpose ir prepared previously by the cultivation of root crops foı the more thorough admixture of the applied manure; out this should not occasion delay in planting trees, as numerous harrowings will accomplish the same object very well, especially if the manure be short. Ground thus well prepared, and proper care afterwards, are far more important thau setting out trees of very large size. A tree of moderate size is less checked in growth by removal, and will, as a consequence, often outstrip a larger tree, provided it receives proper care. The mode of producing immediate plantations of large trees, by removing those already six inches to a foot in diameter, first adopted on a large scale, by Henry Stuart, of Scotland, obtained considerable favor in that moist climate, though wholly unadapted to this country. But Loudon, who had great experience pledged himself to produce a fine and thrifty plantation of large trees in less time, by employing trees of moderate size, placed on deeply trenched and highly enriched soil, kept under good cultivation; several years being required to overcome the stunted and sickly appearance produced in the large trees.

Much time may be gained in bringing young fruit trees into bearing by the selection of varieties, especially of pears. There are some celebrated and excellent old pears, which usually require many years for the production of the first crop; while again there are other varieties, many of them comparatively new, which not unfrequently yield fruit before they leave the nursery row. Dearborn's Seedling, Bartlett, Amire Joannet, Indiana, Andrews, Cushing, Bloodgood, and some other fine varieties, often produce pears when but little larger than a stiff walking-cane. Peach and apple trees have often produced from half a bushel to a bushel per tree, the fourth or fifth year from transplanting, where the best cultivation had been given them. In other cases, where neglected, they have not yielded a peck in ten years.

Before concluding these remarks, we wish to urge one point, so important, that if repeated three hundred times a year, would not be too often if it would accomplish by that means the desired object. This is the thorough and constant cultivation of the soil for several years after young fruit trees are set out. If they are to stand in grass, which should be avoided if possible, a circle, *at least* six feet in diameter, (and better if ten) must be kept spaded mellow round each tree, and no grass nor weeds allowed to grow near it. The difference between neglecting trees, and keeping them in the best state of cultivation, is almost incredible. We lately saw a large orchard of young peach trees, containing several hundred, set out in a new clover lot, and then left to themselves. The consequence was as might have been expected,—not one in twenty was alive. Any other vegetable growth without culture, as grass, grain, &c., would probably have produced the same effect. We have noticed thousands of trees very badly treated in transplanting,—mutilated in removing, —crowded into small holes, which were hastily and imperfectly filled, and every other part of the operation performed in a superficial and hurried manner,—but the deaths from *neglected after-culture*, have exceeded, three-fold, all other causes put together. Remember, therefore, the importance of a constantly clean and mellow soil, if a thrifty and vigorous growth is wanted, with early of crops of fine, rich, and delicious fruit.

BREEDS OF SWINE.

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In an article in our last, in which we spoke of the Berkshire breed, of swine, we stated that two classes of hogs should be kept in the country; "one for supplying the market with meat for eating fresh, and for affording fine, delicate meat for families; the other for making heavy fat pork for barrelling, &c." We propose now to make some further remarks in reference to the subject, and to speak of the breeds best adapted to these purposes.

In our cities and large towns, an immense amount of pork is consumed in a fresh state. For this purpose, small hogs are much better adapted than large ones. They should be small-boned, not over fat, but meaty, plump, fine-grained pigs, weighing, dressed, from forty to a hundred pounds. It is of great consequence, also, that they should be varieties which give good-flavored, or well-tasted meat. There is a vast difference in swine in this respect, though some persons through ignorance or prejudice, will not acknowledge it. We recollect having once spoken to an extensive farmer on this subject, who, with a most incredulous eer, replied—"Why, *pork* is *pork!*" He had probably never tasted any but the coarse flabby pork from such hogs as he kept himself. But there are people who know that there is a great difference in pork We have seen that, the lean of which when roasted, was almost as white as the breast of a turkey, and at the same time had a fineness of grain and richness of flavor not possessed by any other meat.

The breeds which are thought best suited for the fresh-meat market, are the black Essex, the black Sussex, the Suffolk, the Norfolk, the Neapolitan, and the medium-sized Berkshire, or crosses of these.

Of the black Sussex, Mr. HENRY PARSONS, now of Ancaster Canada West, imported some which were kept for some time near Massillon, Ohio. They were small-boned, round-bodied stock, which matured at about a year old, and would weigh when fattened at that age, 250 to 300 lbs. When fed on dairy slop, they would weigh 200 lbs. at eight months old. Their flesh was decidedly the finest, whitest, and best flavored of any which the writer ever tasted. A cross of these and the Berkshires produced some very good stock. The Sussex were long in the rump, with closely coupled and rather arched backs, which served to improve these points which in the Berkshires were sometimes very defective.

The Essex breed seems to be closely allied to the above but have probably been more highly improved, and have a greater aptitude to fatten. We are not aware that any of this breed have been brought to this country, and the writer can only speak of them from the descriptions of others. The best are said to be quite black, with rather long, upright, thin ears. The late Lord WESTERN was noted as a breeder of these pigs, and M W FISHER HOBBS, of Mark's Hall, Essex, has of late years carried many prizes at the shows of the Royal, and various other agricultural societies in England, for a variety called the "Improved Essex." In a late English paper we notice an account of an auction-sale of Mr. HOBBS' live stock, consisting of Hereford cattle, Leicester sheep, and Improved Essex pigs. The boars sold at ten guineas each—the sows at fifteen guineas. Portraits of several of Mr. H's prize pigs have been given in the London Farmers' Magazine.

The Neapolitan hog is also black without hair. The Rev. W. L. RHAM, in his "Dictionary of the Farm," speaking of this breed, says—"No breed can excel it in aptitude to fatten. The sows often become so fat on very scanty food that they will not breed; they are extremely tender, and they happen to have litters in the winter, it is difficult to save the young pigs from dying in cold nights. [This is applicable to England, where the weather is not near as cold as it is here.] A cross of the Neapolitan with some of our hardier breeds, greatly improves their usefulness, without injuring their aptitude to fatten." This variety has been introduced into this country, and crosses of it with some other breeds have resulted favorably We have seen occasional crosses with the Berkshire which did well. Mr. BEMENT, of this city, has a stock of pigs which he calls "Medleys," the result of a cross of the Neapolitan with the Chinese, and some other sort, which appear to be well adapted to killing at an early age, and we are told by a butcher who has several times had of the stock, that the quality of their flesh is excellent.

Of the Suffolk breed, we have known of no importations to this country except those by WM. STICKNEY, Esq., of Boston. We believe he has made three several importations of this variety. We have seen several of the imported ones, as well as several bred by Mr. S., at his farm in Vermont. From what we have seen, we think them not only well adapted for porkers, (or for fresh pork,) but also very well suited for ordinary family purposes, where a medium sized hog is preferred. This breed is spoken of very highly by Mr. RHAM, in his work before mentioned. He says—

"Suffolk pigs are perhaps, on the whole, the most profitable breed in England. They are well shaped, short-legged, mostly white, with short upright ears, and the porkers of this breed are excellent. It may be distinguished from the Essex breed by being better covered with hair, and from the Norfolk by having smaller ears, set more nearly together. The Suffolk pig not so delicate in constitution as the Essex, and is therefore decidedly the best poor man's pig."

The best breeds of hogs for making fat pork for barreling, so far as the knowledge of the writer extends, are the Bedford or Woburn, first brought to this country many years since from the Duke of Bedford's farm, at Woburn the Mackay originated by the late Capt. JOHN MACKAY of Boston; and the variety kept at the Asylum for the Insane, at Worcester, Mass., and popularly known as the "Hospital breed."

The first named breed has formerly been quite widely disseminated over the country; but is believed that only a few of them now remain which retain the characteristics of the originals in such a degree as to be recognized. It is doubted whether any breed ever brought into the country has been of such essential service in improving the shape and qualities of our swine generally, as this. There were several importations of them at various times, from those sent to Gen. WASHINGTON by the Duke of BEDFORD, in 7— to 825, and they were sometimes known under different names; but the testimony in regard to their value was the same, from Virginia and Kentucky to Maine.

The "Hospital breed" before spoken of, is understood to have had for its basis, the Bedford breed, derived from the late Dr. O. FISKE, of Worcester Mass. whose swine were for many years held in the highest esteem. Dr. WOODWARD, the superintendent of the hospital, increased their size by an admixture of some other blood, (said to have been the Mackay preserving at the same time the perfect symmetry of the original Bedfords. The Hospital stock, as exhibited at the Massachusetts state show at Worcester, in 1844, we considered decidedly the most perfect for heavy barreling pork, of any we ever saw. Their dressed weights at eighteen months old, were stated to be from 400 to 500 lbs.

The Mackay breed originated by an admixture of several breeds which Capt. MACKAY, during several years, collected from various parts of the world to which his commercial intercourse led him. The writer first obtained this stock of Capt. M. in 1830, and so far as he knows, was the first to give them the name by which they shortly thereafter became generally known. We bred them for several years, and made several subsequent purchases of Capt. M. They were an excellent stock to fatten—would fat easily at any age, yet grew rapidly, and at eighteen months old reached a large size—sometimes weighing at that age 600 lbs. dressed. At the Massachusetts State show, in 1844, we saw one or two boars which exhibited the characteristics of this stock in considerable perfection. We saw, also, some good specimens of it at the farm of J. P. CUSHING, Esq., in Watertown, Mass., a few years since. But we presume it would be difficult to find many at this time, possessing much affinity with the original stock.

There are very good hogs in various sections of the country, made up of the Leicester, Cheshire, and what are called the "Grass breed;" and where pains are taken in the selection and breeding, a useful and profitable stock is produced.

It may not be amiss to say, that none of the breeds we have mentioned are recommended for a forest range, where the animal is forced to obtain a living by his own unassisted energies. They are *cultivated* breeds, and you cannot have a stock which is at the same time best adapted to a *savage* and a *civilized* state. The great disposition and tendency to fatten, for which the breeds we have named are so much valued, must give place in the "woods hog" to a habit of activity, and a tendency to muscular fibre. Instead of the thin hide and scanty bristles of the *refined* varieties, the hog which is left to provide for himself, must be clad with a covering which will protect him from the inclemencies of the weather, and shield him against the attacks of his enemies. Even in ordinary farm management, the thinness of skin and absence of hair or bristles, may be carried too far. These properties, though indicative of aptitude to fatten, and fine quality of meat, when existing in an extreme degree, impair the constitution and render the animal unfitted for any endurance.

FATTENING HOGS.

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IT has been demonstrated that in fattening hogs, a great saving of food is made by cooking: and we believe that a very considerable improvement in the quality of pork is likewise effected by that process. From experience, we should altogether prefer pork, either for eating fresh or for salting, that had been fattened on dairy-slops, with cooked potatoes, pumpkins, or apples, mixed while hot with a portion of meal, either of corn, rye, barley, oats and peas, or buckwheat. We know the idea is prevalent that the best pork is made from "hard corn and cold water;" some, indeed, who allow their hogs vegetables and slops during the first part of their fattening, confine them wholly to corn for a short time before they are killed, in order, as they say, to "harden" the pork. We are convinced this is erroneous. In the western part of the country, where in many cases nothing but corn is fed to hogs from the time they are able to swallow it till they are slaughtered, the pork is notoriously more *oily*, and not as well tasted as that which is made in sections where a variety of food is used.

In feeding *store* swine, the advantage of cooked food is not so obvious. The digestive organs can manage a small quantity of raw food, even though it be Indian corn, and are probably able to extract the nutriment wholly from it; but if the raw food is increased beyond a certain amount, it will not be thoroughly digested. We have heard it argued that if it were necessary to restrict hogs to a short allowance, it would be best to give the food raw, because the longer time required for its digestion, kept the animals longer free from the pangs of hunger. It must be a belief similar to this, or the result of actual experience, which induces the Irish people, (according to Mr. COLMAN,) to cook their potatoes so slightly as to "leave a stone in the middle." We confess the idea is not to us unreasonable. But when it is wished to *fatten* animals it becomes an object to have them consume as great a quantity of food daily as can be perfectly digested, because the sooner they consume a given amount, the greater will be the proportion of flesh or fat accumulated. Cooking does the work, in part, of digestion, and by thus assisting the functions of the animal, enables it to dispose of a larger quantity, while at the same time, it is disposed in the manner most profitable to the feeder.

From the middle of September to the middle of November, the pumpkin is one of the best articles of food for hogs which the farmer can have. By the way, we deem the pumpkin crop one of the most *profitable* that can be grown. For the production of rich butter, we know of nothing equal to it, and it comes in just when there is usually a deficiency of grass-feed. For fully two months they may be used to excellent advantage and with but little trouble. For cows it is only required to cut them and feed them in their mangers, or break them in pieces on clean sward ground. For hogs they should be boiled in as little water as will answer to cook them, and when soft they should be mashed fine, and about one-fourth of their bulk of meal intimately mixed in. Good, ripe, sweet pumpkins, cooked in this way, with a little whey or skimmed milk, will make hogs fatten as fast as any food we have ever used.

But hogs, like other animals, require a variety of food; they will not do as well confined to one kind, however good it may be; it is best therefore, to vary their diet frequently, or to incorporate several articles into a mass, occasionally changing the relative proportions.

Hogs should be kept dry and comfortably warm, while being fattened. They should be fed in clean troughs, and the appetite should be so closely watched that no food is given them to be left from one meal to another. Nothing should be omitted which will promote their quietude, for on this greatly depends the accumulation of fat. The nervous system has such a connexion with the secretive organs, that an animal which is constantly restless cannot be fattened.

A plentiful supply of charcoal should be allowed to hogs while fattening; it is a good preventive against dyspepsia, a disease which is not confined wholly to the highest order of animals. The coal corrects the acidity of the stomach, and greatly promotes digestion.

THE AUTUMN EVENING.

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Behold the western evening light,
 It melts in deepening gloom!
So calmly Christians sink away
 Descending to the tomb.

The winds breathe low—the withering leaf
 Scarce whispers from the tree!
So gently flows the parting breath
 When good men cease to be.

How beautiful on all the hills
 The crimson light is shed!
'Tis like the peace the Christian gives
 To mourners round his bed.

How mildly on the wandering cloud
 The sunset beam is cast!
'Tis like the memory left behind
 When loved ones breathe their last.

And now above the dews of night
 The yellow star appears!
So faith springs in the heart of those
 Whose eyes are bathed in tears.

But soon the morning's happier light
 Its glories shall restore;
And eyelids that are closed in death
 Shall wake to close no more!

THE STRAWBERRY.

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Mr. Tucker—In saying that the Elton is the same as the Methven Scarlet, I should have added, if the true kind had been sent me. Of this I have some doubt, as one of my neighbors informed me that his is staminate. In obtaining plants from nurseries, mistakes will occur. Many varieties are cultivated adjoining each other, and it is almost impossible to keep them separate.

As regards the character and habits of the strawberry plant, I wrote advisedly, not what I believe to be true, after one or two years' experience, but what I know to be true, after twenty-five years' constant attention to the subject. I wrote of the plant, not merely as it is in my garden or neighborhood, but as it will be found in all climates and in all soils. It is true that staminates will, in some seasons, soils and climates, be more productive than in others, but this does not affect the general principle. I wish my views to be fully understood, as some of our most intelligent Horticulturists now have their attention directed to the subject, and if I am in error, it will soon be made manifest. I hold that all varieties of the Pine and Scarlet strawberries, both in their native and cultivated state, never have the male and female organs perfect in all the blossoms in any large fruited variety. Indeed I know but one variety, (I believe it is the Duke of Kent,) that perfects all its fruit; and this plant is unique—most of the blossoms are perfect in both organs; but a few of them are defective in the male organs, and have to depend on their neighbors for impregnation. The fruit is small, and like most of the staminates, early. I prefer the Kent to all others as an impregnator, not only for its bearing and early maturity, but because it can, from its stem and leaf, be readily distinguished from the Hovey, and most other pistillates. I have one other staminate that I obtained from England, that has both organs perfect in a large portion of the blossoms, and is, I believe, what is called the Virginia Scarlet. The fruit is larger than the Duke of Kent, and valuable as an impregnator. But where early staminates are used, there should be a few of the Downton inserted, as it is a very late bloomer, and will impregnate the late pistillate blossoms after the Scarlet or Duke of Kent is out of bloom.

The variety I got for the Downton, bears but little fruit, many of them flat, and is a plant different in its growth from any other species or variety that I have seen, and can be easily distinguished. What is now called the Virginia Scarlet, is, I believe, staminate. There is a pistillate Virginia Scarlet, with larger fruit.

In raising from seed, in general, the number of staminate and pistillate plants are about equal; but if suffered to run even for a single season, the staminates will root out most of the pistillates. Of the staminates, by far the greater portion will be wholly defective in the female organs, and not bear a single fruit. Of the pistillates, I doubt if one will be found with the male organs sufficiently developed to produce any perfect fruit. With one staminate to ten or twelve pistillates, not one pistillate blossom will fail to bear a perfect fruit, unless crowded too close together, or killed by frost.

A plant, perfect in both organs in all the blossoms, and producing a full crop of perfect fruit, would be a prodigy; and one of that character, producing fruit of the size of Hovey's Seedling, cannot be produced. For such a plant, or one equalling the first perfect fruit of the Ross Phœnix, I will give $500. Mr. Keene, by his famous staminate seedling, made a fortune; yet I aver that his seedling and other staminates so much lauded—the Wilmot's Superb, Deptford Pine, Downton, Emperor, Swainstone Seedling, Iowa and Ross Phœnix, are of no value to cultivate for a crop, and will not, in any soil, or in any climate, in an average of years, produce perfect fruit on one half of the blossoms. I might safely say, not on one fourth. The fruit of most of them is large, and some of them of fine flavor. All the Iowas came originally from my garden.

I can readily believe that you saw a bed of the Ross Phœnix more productive than the Hovey in its vicinity. The former, as far as they could be impregnated, obtained it at home. The Hovey had to depend on the bees to bring the farina from the Ross Phœnix, and may have been too far separated to bear one-fourth of a crop. I have never seen the Ross Phœnix, or any other, equal the Hovey in size. I have seen several quarts of the Hovey, at our horticultural meetings, from the field of Mr. Jackson, varying from four and a half to five one third inches in circumference, and these raised without any thinning of the fruit, to increase the size, or even thinning out the plants. I believe my staminates named are all genuine; if not, I venture to say, if the genuine be staminate, the character I have given of them will apply. The plant never changes its character. Be it staminate or pistillate, or perfect (if such a prodigy be produced,) cultivation, soil or climate will never change its character.

I can readily understand why the Hautbois are so little cultivated, independent of the flavor of the fruit, which all do not admire. The Prolific Hautbois is said to be the only one that will bear. The Prolific is staminate, and will not perfect all its fruit. The Hautbois is a distinct species; it will not impregnate the Pines or Scarlets. There are pistillates of this class, which if planted with the Prolific, will bear abundant crops. By planting the seed of the Prolific, pistillate plants will be produced, and would be in demand.

N. Longworth.

Newark, New-Jersey, Sept. 10*th*, 1846.

KITCHEN CHEMISTRY.—NO. IV

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SOAP.

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All fixed oils and fats, are capable of combination with caustic alkalies, in the formation of *soaps*. There are in commerce three varieties of soap; 1st, *hard white soap*, which is made of tallow with caustic soda; 2d, *hard yellow soap*, which is made from tallow, palm-oil, and resin, with caustic soda; and 3d, *soft soap*, which is a combination of some oil or fat with caustic potash. The great difference between hard and soft soap is this, —that the combinations of the fats or oils with soda, unite with water in chemical union, and form true solid *hydrates*,—in a similar way that a certain portion of water unites with quick-lime in slacking, and becomes solid; while the compounds of oils or fats with potash, merely absorb water, and hence become a gelatinous mass. Potash and soda, as usually existing, are weakened by combination with carbonic acid; to form soap this must be removed, and the alkalies rendered caustic by the addition of lime. The presence of carbonic acid may always be discovered by adding an acid or strong vinegar, when it will cause effervescence.

Hard white soap is made substantially as follows:—A solution of caustic soda, so strong that its specific gravity will be 1.05 is prepared, which has been rendered caustic by the addition of quick-lime, to take from it its carbonic acid. This solution, or soda-ley, is then made to boil, and the tallow is added in small portions at a time, until the soda is saturated, and will convert no more tallow into soap. The soap is then separated from the water by adding, gradually, common salt; the soap being insoluble in a solution of common salt, is separated and floats on the surface. A proper portion of salt must be added, so as not to deprive it of too much water, which its appearance will indicate; when it is run into wooden boxes, and cut by a wire into the forms it has in commerce. It thus usually contains from forty to fifty per cent. of water; if not over thirty, it is very hard; and if seventy, is not very soft.

Soft soap is manufactured on a large scale, by heating whale or seal oil,—with the addition of a portion of tallow to render it less liquid,—in large shallow pans, and gradually adding a strong solution of caustic potash, boiling, and continually agitating the mass, until the milkiness produced by the oil vanishes, and the whole becomes nearly transparent, and the froth subsides. It is evaporated until the operator recognizes the proper consistency, and is then rapidly cooled.

But as every good housewife makes her own soap, directions more particularly applicable to domestic manufacture, may be most valuable.

As potash acts strongly on woody fibre, a strong thick *leach-tub*, for dissolving the ashes into ley, should be obtained; a portion of the hollow trunk of a bass-wood tree makes the best and most durable. Four barrels of ashes will usually make one barrel of good soap, and sometimes more. As all ashes become more or less weakened by a combination with the carbonic acid of the air, a layer of quick-lime must be spread after the first portion of ashes is put in, to absorb this acid from the ley as it passes downwards. Enough is not usually put in; there should be sufficient to absorb all this acid, say at least a peck to a barrel of ashes—it can do no hurt. It very often happens that entire failure results from a neglect; the house-wife finds her ley to be of full strength by means of the domestic hydrometer, a hen's egg,—but no soap is the result. A sympathising neighbor tells her that she is working in the wrong time of the moon—or that perhaps her soap is bewitched. A strong effervescence of the ley with sharp vinegar, usually tells the secret; and the application of caustic lime will not unfrequently remove the difficulty at once and restore order. The ashes should be closely beaten down in the tub, or else the water will descend too rapidly through it, and before it becomes saturated with the dissolved potash;—the only remedy in which case being to run the ley again through the ashes. The ley should always be used fresh, as it becomes weakened so much in a day or two, by exposure to the carbonic acid of the air, that soap cannot be made. In such cases, the remedy consists in adding fresh lime to render it caustic.

The fat usually employed, is the refuse grease of the kitchen, which does well; to prevent it from becoming mouldy, before use, it should be covered with weak or strong ley. When used, it is *boiled* over the fire, and small portions of ley successively added, keeping it boiling, till there are two gallons of ley to four pounds of grease. Weak ley must not be added during the process, if it becomes of less strength towards the close of the running. Let the soap boil, to evaporate, until the proper consistency is shown by adding to a portion, an equal bulk of water. If good, add to the whole its own bulk of water, stirring it well, and the process is completed. The consistency of soap is controlled by this addition of water. The best is tenacious, and not brittle, which induces waste. The corroding quality of soap is owing to the deficiency of grease.

Soap must be kept in a pine tub—a thick pine tar-barrel is good.

HINTS TO THOSE ON SMALL FARMS.

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Ed. Cultivator—Having but a few acres of land to cultivate, I have made it my study to obtain as much as possible from those few. The amount of manure I can command is small, hence I have not been permitted to accomplish this object by heavy crops from a high state of fertility. But I have been compelled to do it by a selection of crops profitable in themselves; some of which are as yet scarcely known, as farm crops, to farmers generally.

Among these, root crops hold an important place. I have formerly raised ruta bagas, and field beets largely; the former are very easily raised on light soils, costing me usually from 3 to 5 cents per bushel, according to the favorableness of the season. But to be raised thus cheaply, the land must be previously rich and well tilled, and cleared of weeds, and the young plants must be hoed before they are two inches high. The hoeing must be *finished* before they are that height. This is perfectly indispensible. Some of my richer neighbors have tried to raise them. The have selected some waste piece of ground, where a manure-yard, old stack, or demolished building formerly stood, such spots being of rich soil. But they seemed to forget that such places are also richly charged with the seeds of weeds, hence hard job to hoe the young crop. To make the matter ten times worse, they put off the hoeing a week, when the weeds had shot up six inches or a foot high, and the labor of cleaning them became enormous; while half the amount of the crop was lost by the stunting they thus received. What was the conclusion? "Why these rooty beggys are the hardest crop I ever raised, and I shan't have nothing more to do with 'em."

Roots, raised in the cheap manner I have already described, I have found of the greatest advantage, nay, almost indispensible, in carrying my stock through winter, reducing the amount of hay needed to one-half, and requiring but little land comparatively for their production.

But useful as I have found ruta bagas, for feeding horses, store cattle, &c., I never could make them answer perfectly for milch cows; the milk and butter would have a slight taste of the turnep, alhough this was greatly diminished by feeding just after milking, and by working all the butter-milk from the butter. Hence I have adopted Carrots as the main root crop. They are hardly so productive as turneps, but their superior richness far surpasses all other roots. Horses, not very fond of ruta bagas, will often prefer carrots to oats themselves, and for feeding in company with oats and hay, they are superb. All cattle eat them with avidity; and milch cows through winter if fed on them plentifully, give the richest milk and make the best butter. The white carrot, projecting from the ground four to six inches, is very easily harvested, and is more productive than the yellow carrot; while the latter has the advantage of remaining uninjured if left in the ground till spring. Hence I raise some of each.

But the crop most neglected by farmers, and which I find the most profitable of all, is *corn*, sown *in thick drills for fodder*. This mode of raising fodder is so easy, requires so little labor, and yields so enormous a crop, that it is eminently worthy the adoption of every farmer, rich and poor, small and great, in debt and out of debt, thriving and not thriving, east, west, north, and south. Good soil is plowed, harrowed, and furrowed about two feet apart, as for potatoes; one man strews the grain from a basket along the furrow as fast as he can walk, about fifty grains to a foot, or two bushels to the acre; another follows with a common harrow, lengthwise with the furrows, or across them as is most convenient, and covers the seed. Passing the cultivator once or twice between the rows afterwards, is all the attention the crop needs. It quickly grows up, and covering the whole ground, entirely precludes the necessity of hoeing. When the crop is taken off in autumn, the ground is clean as a floor, (and they are not always clean, I am sorry to say.) Wheat may be sown after, with very great propriety, as the mere growth of herbage, (no grain being produced,) does not exhaust the soil. Hence this becomes an excellent crop for a course in rotation. The amount, (if sown thick enough, not otherwise,) is about five to seven tons to the acre, of the very best fodder, cattle eating all the stalks; and by the most liberal estimate of labor, interest on land, and cost of seed, I have never made it cost more than two dollars a ton—often not more than a dollar and a half. This crop may be sown right after the usual time of planting corn, and before hoeing commences; and may be harvested directly after the usual harvests. One load of it is worth more than two of common corn-stalk fodder. My neighbors all around are astonished at the advantages I derive from this crop, and resolve to try it themselves; but when the usual time arrives for sowing it, something prevents, or they have not land to spare, and it is neglected. Because I have not land to spare, is the very reason I adopt this course; for with one acre, I get as much of better fodder as is usually obtained from four or five acres of meadow.

The use of ashes, plaster, domestic poudrette, and muck, I find very beneficial, in the absence of a large supply of common manure; and the use of the subsoil plow lately commenced will, I doubt not, be very advantageous.

X. Y. Z.

ROT IN POTATOES.

……

Mr. Tucker—From my own observation, and from the reports of others, who have themselves either dug, or commenced digging their potatoes at the present date, I have come to the conclusion that the crop, at least in this county, is a very light one, seldom exceeding, and often not reaching 90 or 100 bushels per acre. In several cases the yield has not exceeded 50 to 60 bushels per acre; indeed the price which they bring at this season, and which is nearly double what it generally is, is a good criterion to show the estimate that is put on the crop in regard to quantity. The season has certainly been in most respects, a genial one for the potato crop, and till the latter part of July and beginning of August, potatoes generally never presented a finer appearance; but at that date, for the space of about a fortnight, the fatal blight, with its fatal curl and dark deadly poison, cut off and withered the tops, rotting at the same time, many, if not the most, of the largest potatoes, the outsides and remains of which are now dug out of many of the hills. I have seen some loads which appear to have spotted or specked ones among them, that the farmers were now bringing to market, but in general I have reason to believe that there will be a good proportion of sound potatoes. My own, so far as dug, are perfectly sound, apparently, and I am inclined to think will keep. Those of my neighbors which I have seen are apparently in the same condition; our soil is mostly a loamy sand. I do not know that those grown on clay soils have any more tendency to spoil, though I have been *told* of some cases where they decayed so rapidly after being dug, that they were unfit to be used in forty-eight hours.

After reading the following facts from a late number of the (London) *Gardeners' Chronicle*, it appears that the origin of the potato disease, is as yet, like truth, at the bottom of a most unfathomable well. "We foresee," says the writer, "an inundation of theories as to the cause of the potato disease, which every one finds himself capable of explaining, except those who have most information about it. We may therefore save the time of our readers and correspondents as well as our own, if we take this early opportunity of expressing our intention of not giving insertion to any speculations upon the subject, unless they involve new matter, and are supported by authenticated evidence.

" The following causes for the disease have already been suggested:—

1. The bad season of 1845.
2. Attacks of parasitical fungi.
3. Insects, worms (the idlest of all speculations.)
4. Frost.
5. Lightning.
6. Exhausted vitality.
7. Bad cultivation.
8. Guano and other manure.
9. Miasmata, such as produce cholera in man, and murrain in cattle.

"The last explaining an unknown cause by an unknown agency, whose mode of action in the first instance is beyond human perception, may be taken as the last and best refuge of theorists, for it is alike incapable of proof or disproof.

"Of the remainder we shall only say that they appear to us to be all untenable. Even the season of 1845, which seemed to us and so many others peculiarly suited to bring on the affection, we long ago disclaimed as a true cause; for irresistible evidence to the contrary accumulated during the winter. In fact, no theory of the potato disease will satisfy the conditions of the problem, unless it explains the following unquestionable facts:—

"1. It has for some years past been violent in St. Helena.

"2. It appeared in the year 1845 at Genoa and Lisbon, and at Grahamstown, in the Cape colony, *exclusively* in potato crops obtained from English seed, and therefore of the growth of 1844.

"3. It appeared in the year 1845 in the Bermudas, in fields cropped with potatoes obtained from the United States, and not in those which had been cropped with Bermuda sets.

"4. It has broken out in New-Holland, upon the authority of Dr. Francis Campbell, in a letter to the Sydney *Morning Herald*, dated March 18, 1846.

"5. It was little known in bog or moss land, in 1845, and now has broken out there with as much violence as elsewhere.

"6. It is accompanied by an increased excitability of the potatoes both young and old.

"7. It *invariably* begins as a brown decay of the bark of the potato stem, under ground and an inch or two above its origin from the old set. To this we have never yet found an exception; all the blotching and searing of leaves are long posterior to this.

"8. It has broken out at this moment (Aug. 12, 1846.) in crops obtained on well drained unmanured land, from sets imported from Naples, the Azores, Oporto, and New Granada, every one of which places was reported to be uninfected."

What has rendered the disease so singular in this neighborhood, was the rapidity with which the potatoes first decayed, and the sudden stop that all at once was put to its ravages. A neighbor of mine, who is a market man, was so much affrighted at the ravages that were going on in his "carters," that he dug them up as fast as he could, throwing out the affected ones, which were nearly half the crop; this was in the beginning of August; a part of the same potatoes being left till this time, are now apparently sound, though I should not deepnd on them. Rusticus.

Bethlehem, Albany Co., 1846.

SOUTH DOWN SHEEP.

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In an English paper, we find an account of the ram-letting of Mr. Jonas Webb, of Babraham, in Cambridgeshire. The meeting is said to have been attended by various noblemen, agriculturists and breeders from every county in the kingdom, and among the company was our distinguished countryman, Mr. Colman. Sixty South Down Rams were let at an average of £16, or about $80, for the season. The highest priced one was hired by the Earl of Leicester for 50 guineas, or $250 the season. After the sale, about 250 noblemen, gentlemen, and agriculturists, sat down to a dinner provided by Mr. Webb. Several good speeches were made at the table, and among others, Mr. Colman was called on, who, after alluding to the happy conclusion to which the rumored war between England and the United States had been brought, said "he had witnessed with much pleasure the improvements which science and art, combined with great practical knowledge, had enabled an individual to effect in one department of agriculture. He had seen the Lincolnshire sheep, weighing 70 lbs. to the quarter; he had seen the Dorsetshire sheep giving lambs twice a year; he had seen the Cheviot sheep of Scotland, and further north, an admirable and profitable animal; he had seen the Leicester sheep staggering under their own weight, and waddling oppressed from their oppressive fatness; but, in point of symmetry, weight, quality of wool, hardiness of constitution, and general profitableness to the farmer, he had seen none which equalled Mr. Webb's South-Downs. Now-a-days, they heard much of uniting science with practice. He meant no disrespect to science when he said that science was not confined to mere mechanical rules, or mere book-knowledge. What was science—what was wisdom—but knowledge gathered from reading, from experience, from observation? And it was by the practical application of this information, that all theories must be tested. Though he honored science, he honored practice still more. He had no objection to theories, (he was indeed interested in theories,) but he preferred the results of practical experiments, and would give more for Mr. John Hudson's opinion of the use of malt in fattening cattle, than for all the theories in Christendom; and he had more respect for the opinion of Mr. Jonas Webb on improving the breed of sheep, than for all the physiological knowledge of his most respected friend, Professor Playfair, who, being a most respectable bachelor, had probably never engaged in breeding at all."

In concluding his speech, Mr. **Colman** spoke of the kindness and hospitality he had received in England, which, he said he should long remember. He spoke also in happy terms of the relations existing between England and the United States. The two countries, he said, "were separated by a wide ocean—wide they once called it, but every day brought it nearer to them, and he believed that in six months, they would be within six days'[?] distance from each other. Why, then, should they not come home? Why should they not be drawn together? The same language was common to both—the same blood: their free institutions were from the free inspirations of liberty which first heaved in British hearts, and God grant that the two great nations of the earth might soon learn to scorn those miserable and irritating feuds which were calculated to stir up and increase the bad blood which had so long existed in the hearts of nations towards each other. He hoped the time was fast coming when the words of the noble Lord who had just retired from the Secretaryship of Foreign Affairs, might be indellibly stamped on every heart, when war should be considered as unchristian, and under all circumstances a crime."

NEW-YORK STATE AG. SOCIETY.

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Report of the Committee on Stock owned out of the State, exhibited at the Auburn Meeting.

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The Committee on stock owned out of the state, would respectfnlly report:—

Horses and sheep were the only foreign stock exhibited.

"Gifford Morgan," a dark chestnut stallion, fourteen hands and three inches high, aged twenty years, was exhibited by Mr. F. A. Wier, of Walpole, N. H. It is claimed on the part of his owner, that this horse possesses the celebrated "Morgan" blood in greater purity than any other now living.

"General Gifford," 6 years old, got by the above named horse, was exhibited by Mr. C. Blodgett, of Chelsea, Vt. In his size, figure, action, and color, he closely resembles his sire. Both are exceedingly compact horses, deep chested, strong backed, with fore legs set wide apart, and carrying their heads (which are small, with fine, well set eyes,) high and gracefully, without a bearing rein. Their action attracted the marked admiration of all. This breed are reputed to possess great bottom and hardiness, and everything about the two presented goes to prove that their reputation in this particular, is well founded. For light carriage or buggy horses, it would be difficult to equal them, and if by crossing with prime large mares of any breed, size could be obtained in the progeny, without losing the fire and action of the Morgan, the result of the cross would be a carriage horse of very superior quality. Your committee are not aware of the extent or result of such crosses, in the region where the Morgans originated. Unless experience has already demonstrated their inutility, we would recommend to our horse breeders, some well considered experiments, limited at first, to test the feasibility of engrafting the Morgan characteristics on a larger horse.

Of **Sheep**, four lots, all claiming to be thorough bred Merinos, were exhibited, as follows:—

De Witt C. Doane, of ———, Vt., twelve rams;

Messrs. Rockwell and Sandford, of Cornwall, Vt., forty-four rams;

Messrs. Bingham and Jones, of Cornwall, Vt., fifty rams;

Mr. R. V. Horton, of Hubbardton, Vt., thirty rams.

Your committee will not attempt to enter upon any detailed description of each of the several lots above enumerated. Shades of difference were observable in the quality of the lots, and between individuals of the same lot,—but all belong to the same general family, and bore the same general stamp. The fleeces of many of them were heavy, with wool of a medium quality. On most of them however, the fleece was uneven, giving coarse wool, and on the coarsest individuals, jar or hair, on the thighs, dewlap, and wrinkles. Your committee belive this a very serious objection to sheep bred for wool-growing purposes. They would recommend to the owners of the several flocks from which these were drawn, a careful effort to improve the quality and evenness of their wool, without materially diminishing the weight of fleece,—an object which observation has satisfied your committee is attainable with little difficulty.

A pen of ten Saxon ewes were presented by Mr. Samuel D. Colt, of Pittsfield, Mass. Their fleeces were even, heavy for this variety of sheep, of good fair quality, and the form and style of the sheep excellent. They possessed too, that similarity, that family resemblance, which constitutes one of the first proofs of good breeding.

Your Committee, on behalf of the Society, would tender thanks to the spirited breeders of stock from other states, who have exhibited their animals on this occasion.

Henry S. Randall, Ch'n.,
James M. Ellis,
Otto F. Marshall.

A PLEA FOR FRUIT.

......

Mr. Tucker—Every true patriot and philanthropist, must see, in the increase of rural culture and rural embellishment, something more substantial than the mere pocketing of dollars and cents. Every means of rendering a man's home attractive, also tends to promote domestic enjoyment and social virtue. The cultivation of a garden, for the useful and delicious, as well as for the beautiful, has an almost irresistible tendency to draw the mind from those grosser associations, which so often lead to dissipation and ruin. In short, there is perhaps nothing in the whole visible creation, that has a stronger tendency to check the wild and roving disposition which characterizes semi-barbarians, than refined horticultural pursuits. "When nations grow to civility and elegance," said Lord Bacon, "men come to build stately sooner than to garden finely, as if gardening were the greater perfection,"—a perfection on the prevalence of which, even our republican edifice in a great measure must owe its stability; for what foundation can endure on a moving mass of sand? What government can remain settled among a wandering people who have no attractions for home?

Downing says that "fine fruit is the most perfect union of the useful and beautiful that the earth knows." These facts being admitted, it must of course be obvious that every attempt to thwart the cultivator in the attainment of his wishes—in the enjoyment of the fruit of his labor, is gross vandalism. The man who would discourage the honest and industrious cultivator by turning unrestrained upon him the pilferer—whether that pilferer be the truant school-boy, or the overgrown loafer, the candidate for the prison—whether that pilferer be in the shape of the insect, which in whole crowds assails his fruit—or whether in the shape of birds, who remorselessly attack or defile whatever is valuable and the result of years of labor,—the man who would turn loose these marauders, and cry down every attempt to check their ravages,—has most essentially the spirit of the vandal, and has forgotten the true promptings of patriotism.

It is true, the Curculios,—who destroy, every year, millions of dollars worth of fruit, only obey the promptings of their nature, and hence are innocent of *crime*. They are, also, very beautiful animals, when viewed through a microscope; must that save them? The birds are equally innocent—they are also beautiful; must that save them? Cowper said very justly,

> "I would not enter on my list of friends,
> Though graced with polished manners and fine sense,
> Yet wanting sensibility, the man
> Who, *needless* sets his foot upon a worm."

But when need requires it, all the rest of the animal creation must bow to the wants of man. But some would alter the original law, so as to read thus: "'And have dominion over the fish of the sea, and over the fowls of the air, and over every living thing that moveth upon the earth,' except such birds as are handsome, and sing prettily—such thou shalt not touch." Every part of the creation was pronounced *good;* yet every thing equally was to be sacrificed to the wants of man when he needed it, whether for food or for protection—and the notion that mere external beauty,—such as taste or fashion may regard such,—is to shield and protect, is too much like the modern practice of acquitting handsome, rich, or well-dressed scoundrels in courts of law, for crimes committed.

These remarks, every one will doubtless understand, apply only to such birds or other animals, as render themselves decided nuisances by doing more mischief than good; and they were in part prompted by a leader in the New-England Farmer, written by a correspondent, who says that a "love of birds ought to be a part of our religion," forgetting that a moscheto, when microscopically examined, is as perfect and beautiful an animal as a bird, and equally the work of creative wisdom; who denounces as destitute of humanity, the man who does not agree with *him,* in *his* notions of beauty and music, and with *his partialities* towards certain parts of the Creator's works, all equally pronounced "good;" and who makes the following profound remark, needing no comment, "*Original sin* attaches to the poor snake; but the poor bird is only accountable for a little *actual transgression.*" X.

CROSS-BREEDING OF VEGETABLES.

Many people seem to have strange notions in regard to the "mixing," as it is called, of plants or vegetables. They suppose, for instance, that different varieties of potatoes, by being planted in the same hill, will, by some mysterious process, become so contaminated that the original kinds are not produced, but spurious mongrels, only, are generated. How this supposed mixture is produced, we have never seen any attempt to explain; and we presume those who believe in such transmutation, have themselves but vague ideas of the process.

We do not, however, by any means intend to deny that mixtures of different varieties, and sometimes different species of plants may take place; but we do contend that such mixtures can only take place in a *natural* way—that is by actual cross-breeding. The different varieties of beets may be mixed, and the different varieties of turneps, and even the different *species* of the brassica tribe—cabbages, radishes, turneps, mustard, &c.,—are susceptible of intermixture with each other *through the medium of the blossoms, and in no other way.* They might be grown in the closest contiguity forever, and if not suffered to blossom, would never mix; and we should as soon think of the bulbs of different kinds of beets or turneps mixing while growing together, as that the tubers of potatoes could be mixed in that manner. A mixture in either case would be altogether miraculous.

When plants are in flower, the pistils, or female organs, are liable to receive the pollen, or impregnating dust from the stamens, or male organs, not belonging to the same flower, or to the same variety; and when this happens, the seed so produced contains the germ of a new variety resulting from the intermixture.

Now in relation to potatoes, *the tubers are not seed*—the seed is produced in the balls, *or fruit,* on the top of the stalk, being preceded by blossoms as all other fruit is.

An example of the manner in which potatoes mix in the blossom, came under our observation in an experiment made in this vicinity by Mr. Daniel Poineer. In 1845, he had growing in the same lot, the Mercers, Pink-Eyes, English-Whites, Long-Reds, (or Merinos,) Blue Pink-Eyes, (or Round Blues,) and a kind called Prolific Blues. From the latter he saved a quantity of balls, which last spring were planted in a bed by themselves. Some of the plants were struck with the blight, or "disease," and had their growth stopped at the time other potatoes in the lot were attacked. Otherwise they grew well, and some of the tubers attained the size of hen's eggs. On digging them, there were found to be some six or seven kinds, only one of which bore any special resemblance to the kind from which the balls had been taken, and none were exactly like any of the other kinds grown in the field; but there were Whites, Reds, Pink-Eyes, &c., all evidently new varieties; the appearance of most of them betraying their parentage, or denoting from what mixture of kinds they had originated. Another years' trial will more fully develope the qualities of the new kinds, when it may appear that some of them are of superior value.

Mixing vegetables or fruits, is commonly called *hybridizing.* The late T. A. Knight, president of the London Horticultural Society, was distinguished for his success in the production of new and valuable kinds of fruits—apples, pears, and cherries—by this mode. His practice was to select flowers from two varieties which he deemed most likely by intermixture to produce the desired improvement. He then cut out with scissors, all the stamens from the blossoms which he wished to impregnate with the other variety. This was done as soon as the flower was developed, and before the pollen was formed. The flowers were then protected by thin muslin tied carefully over, till the stigma became fully dilated, and the pollen might be shaken from the stamens of other blossoms, when the covering was removed, and the pollen from flowers of the impregnating variety, well scattered over the pistils, and the covering resumed till the fruit commenced swelling. The seeds formed by flowers thus impregnated, produced trees which bore fruit showing the results of the intermixture, and which was in many instances of improved quality.

We have been informed that the Shakers of Niskayuna have a very choice kind of grapes, produced by cross-breeding.

CULTIVATING ROUND FRUIT TREES.

The importance of the clean and thorough cultivation of the ground round young fruit trees, was very satisfactorily shown by an experiment the present season, on the grounds of T. G. Yeoman of Walworth, Wayne co., N. Y. A part of his young standards grew on ground occupied with field beets, a part with carrots, and the rest with young fruit trees only a few inches high, in rows about four feet apart. The latter, of course, made much less draft on the soil than the others, covering as they did but a very small part of the surface, all being kept thoroughly cultivated. The trees on this part consequently made a most vigorous growth; on the carrot ground the growth was very conspicuously diminished; while on the ground occupied by beets, the young shoots were not more than one-half the length of those first mentioned. This experiment is the more interesting from the fact that these root crops, if well hoed, as they were in the present instance, are found to be incomparably better for the trees, than the very common way of planting them in grain fields or in grass. Potatoes were not tried; but we have seen a row of peach trees growing in potato grounds, none of which had made shoots of *less* than a foot and a half, while side by side, in wheat, under circumstances otherwise precisely the same, none of the trees had grown more than three inches.

The best orchard of bearing peach trees we ever saw, was on ground kept perfectly clean and mellow by cultivation, no other crop being allowed to occupy the soil; and we have no doubt that those who own orchards of fine fruit would find it greatly to their advantage to discard every other crop on ground thus occupied, in order to keep it perfectly mellow by successive plowing and harrowing; this would certainly be the case where, as in many cases, the orchard proves more valuable than all the rest of the farm.

Flying Weevil.

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Parasitic Insect which preys on the Weevil.

* Of the order Hymenoptera, probably an Ichneumon or Sphex.

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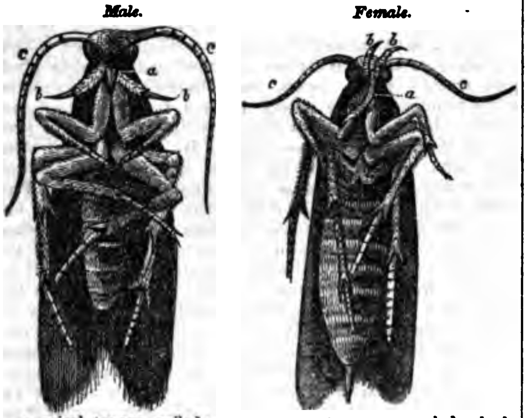
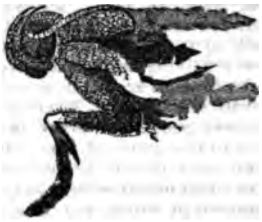
Moth of Flying Weevil magnified.



a, spiral tongue coiled; *b*, *b*, palpi unfolded, as they usually are after death; *c*, *c*, antennæ.

a, tongue uncoiled; *b*, *b*, palpi recurved: *c*, *c*, antennæ.

Parts of the Moth magnified.



Side view of the head, a portion of the wing and the fore leg, exhibiting the minute feathering.

Side view of the ovipositor, drawn out, with part of the lowest segment of the abdomen.

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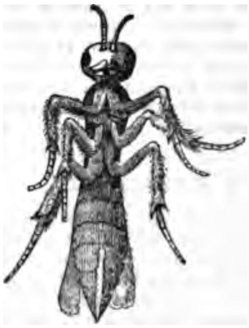
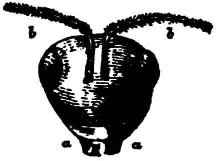
Hymenopterous Fly magnified.



Head viewed from above.



b, b, antennæ; a, a, mandibles.

Front view of head

FLYING WEEVIL.

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Mr. Tucker—In accordance with your intimation, in the July number of the Cultivator, that the drawings illustrative of the Flying Weevil or Grainmoth, would be acceptable, I herewith transmit a view of the insect, in its various stages, of the natural size; and of the moth magnified. I also send a sketch of the fly which preys upon the moth; although I have been unable to give some of the magnified parts as distinctly as I should like. This arises partly from the want of a sufficiently powerful lens, and partly from the insects being imperfect. The only specimens to which I have access, at present, were given me by a friend, and have been enclosed in a small tin case, for nearly a year, along with grains of wheat. There are portions of perhaps a hundred flies thus enclosed, (nearly as many indeed as there are of weevil,) but unfortunately they are so dry and brittle, that it is difficult to find the more delicate members in a perfect state.

For this reason, and also from the minuteness of the insect, it is a puzzling affair, at least for me, to determine the genus to which it belongs, by ascertaining, positively, the form of the mouth and its appendages, of the antennæ, and of the sting. At present, from the mandibles appearing notched, and the attennæ filiform, and about ten in number, I incline to place these small flies among the *spheges*.

The Encyc. Brit., in describing one sub-division of that genus, remarks, that most of the perfect insects deposit their eggs in the bodies of other insects; and that the larvæ of these serve as food for the spheges or for their young.

On the other hand, the sting of our fly seems, in some specimens, at all events, quite visible along the abdomen, more like those of the *Ichneumonodiæ*, and not concealed, as is stated to be the case, with insects of the sphex genus.

Should I be able to obtain some specimens of the fly in good preservation, I shall endeavor to forward them to Dr. Harris or to Dr. Fitch, for their inspection.

Mr. Bolton, the intelligent owner of a steam flouring mill in this place, on reading my former communication, regarding the wheat moth, sent me the following

Additional Suggestions.

Mr. R. Owen—Dear Sir—As practical addenda to your article on the weevil, I present you my experience in saving wheat during the past year.

I received about 300 bushels of wheat, in small parcels, during the month of July; the grain was spread upon the floor of a loft, and for three or four weeks I saw no signs of danger from the weevil. By degrees, great numbers of the insects began to cover the surface, and I found the mass was becoming warmer than the surrounding air. I immediately passed the wheat through a common fan, into a bin on the ground floor. Here we examined the grains and found eggs, also small worms evidently penetrating the grain.

I was much alarmed, but determined not to give up to the enemy without a struggle. In about ten days, the temperature began to rise again; I immediately sent the wheat back to the loft, spread it out, and, in about a week after, passed it through the fan, back to the bin, where it remained without change, until I sold it 2 months ago. The millers found no fault with it; the weight 60 lbs. to the bushel.

I heard of no wheat being lost by weevil, last summer, which was threshed out early, say in July; after that I believe all suffered more or less. Some saved their wheat without any care after threshing; and all who took the pains to cool their grain before it became much heated, had the pleasure of eating good bread.

I recommend my course of management, because the means are within the reach of all those who are willing to bestow the labor.

Yours, most respectfully, SAM'L BOLTON.

Mr. Fleischmann, a highly intellectual gentleman, formerly engaged in the Patent Office, and now just returned from a visit to Europe, (a tour expressly devoted to the collection and diffusion of useful scientific information,) has brought with him a new method of preserving grain for seed, which he suggests might also probably prevent the hatching of insect eggs. A hard crust is formed round the grain, which is thereby almost hermetically covered, yet readily dissolves when in the ground, and serves, at the same time, as nourishment for the tender roots of the young plant.

I shall conclude this article, by pointing out a few typographical errors, in the printing of my former communication, [see July number Cult.,] which I mention because, in some cases, those errors entirely altered the idea intended to be conveyed. On the first column of page 209, fifteenth line from the top, "*oral*" occurs, instead of "*oval*;" again, 2d column, page 210, 37th line from below, "*correct*" is printed instead of "*incorrect*;" then on the 2d column, 29th line from the bottom, page 211, "pays his rent—a bushel—" should read "pays his *cent* a bushel" or per bushel.

Perhaps I am more particular in wishing to see this subject correct in all its details, than the matter may appear to justify; at all events, to citizens of the eastern states. But with us in the west, these insects are even now a serious evil, and (although this year found only in hundreds where they were formerly found in millions) the evil may hereafter increase, if not arrested. If, therefore, any of my suggestions should prove useful, I shall be highly gratified. RICHARD OWEN.

New-Harmony, Ia., 28th August, 1846.

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A correspondent of the *Greenville* (S. C.) *Mountaineer*, having read Mr. OWEN's article on the Flying Weevil, in our July number, makes the following remarks in regard to protecting wheat from this insect.

"Get the wheat out at least before the 1st of August, and as soon after it is out as possible, sun it until it is perfectly dry, and put it up in hogsheads while hot as the sun in a hot day can make it, and have the vessels, into which it is to be put, fire-heated as hot as they can be made. Wheat put up this way will at least keep perfectly well one year, and perhaps several. I have a few bushels of my last year's crop now on hand, as free from weevil as when it was first put up. Whether it is the heating that destroys the weevil egg, or whether it is the drying of the wheat, I can't say, positively, but am inclined to the opinion that the drying has the principal influence, for I have seen hogsheads of wheat, after being put up in this way, left in the field with a mere covering of loose clapboards, which permitted the top of the wheat to absorb moisture, and the top of the wheat thus exposed became affected with weevil, while the wheat in the bottom or lower parts of the hogshead remained still perfectly free from their ravages. At our mill, in this village, there is a large rock, very convenient, on which I usually sun mine before putting it up, and I have frequently had flour made from wheat a year or more old as good and as fair as could be desired."

OX-TAIL SOUP.—Prior to 1685, the butchers of London, in disposing of bullock-hides to the felt-mongers, were accustomed to leave on the tails. The French refugees, however, bought them up, and introduced into use that nutritious dish called ox-tail soup.

THE DISTRICT SCHOOL HOUSE.

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MR. TUCKER—In one of our recent excursions, we chanced to pass through a region, which has for a long time been more than ordinarily (even for the present progressive age,) celebrated for its intelligence and agricultural enterprize. The broad and beautiful street through which we passed, was separated from the adjoining fields by substantial fences, along whose line, tall trees of rich variety were scattered in unbroken order as far as the eye could trace the windings of the graceful avenue; and their firm arms gave assurance, as they extended themselves into the nether atmosphere, that they would ere long meet their fellows and join in an umbrageous union until the whole range of their dominion should be transformed into a proud alcove with verdant canopy. The neighboring fields were arrayed in rich habiliments; the dwellings rose pleasantly from well filled parterres where fruit trees and shrubbery of all varieties beautifully blended.

There was one object in this paraphernalia of beauty and prosperity which in a particular manner attracted my attention, inasmuch as it gave more decisive evidence of a provident care for the future than any we have noticed. This was the "*district school house*." Smile not, ye sons of affluence, who disdain to have your children mingle with the crowd around you, and who must, if they obtain an education, receive it in a more voluptuous way. Throw not aside your paper, gentle reader, nor venture the unpremeditated remark that you "wish to hear nothing on the subject of common schools." The topic, however unmanageable and unmanaged it may be in our hands, is one of vital interest to the wellbeing of succeeding generations, and the growing prosperity of our whole country. Yes, despise the humble abodes where knowledge in its most unpretending character unlocks the mind, and sheds its humblest, mildest rays, if you choose; they are the fountains of knowledge after all, where the great mass *must* come and take their earliest draughts, if they drink at all. Annihilate them, if you will, and you destroy one of the firmest pillars that support the loftiest dome of our country's glory—the intelligence of the *whole* people.

But we have digressed from the proposed subject—*that school house*, located in the midst of rural thrift and loveliness. It was the central stone in a rich inlaying of choice diamonds. Its external appearance gave assurance of comfort, and so much neatness revealed by its freshly painted white walls, erected in true gothic style, its large windows adorned and protected by light green blinds, that we felt an inclination to view its internal arrangement. Permission being granted, we went in, and found that a principle beyond outside show, had been carried out in the completion of the building. The seats and desks were arranged in a manner admirably adapted to the comfort and convenience of both teacher and scholars. The walls neatly papered, and adorned at intervals with maps and historical paintings, gave a fitter semblance of a picture-gallery, than of many of our modern school houses, with broken and smoky walls. On one side of the building stood the school library, in a neat but simple case, containing books enough on various topics to furnish the children of any neighborhood with what would once have been termed a *finished* education, after the art of reading was once acquired; and what was very agreeable, these books gave decidedly more appearance of having been *read*, than of having been carelessly handled and thrown aside. Directly opposite the library, and in a similar case with glass doors, was a small but choice collection of minerals, with which, as I was informed, the teacher was in the habit of *talking* to the whole school, in explanation of the sciences to which they relate, for a few minutes at the close of the school, once or twice in the week. What valuable funds of knowledge may thus be gathered up by the way-side, as it were, it may be an act of folly to predict!

But one thing in the external arrangement of this establishment, in our zeal for a view of the internal, has-been omitted, which is worthy of notice. It was the neat and somewhat spacious yard separating it from the public thoroughfare, and bounded on the north and west by a lovely grove of nature's own planting. This yard was well laid out in walks and adorned by trees, and shrubs, and plants, from every clime which would stand the out-door exposure of our northern winters, with beautiful flower-beds, gaily interspersed among them. These rich contributions of Sylvia and Flora, as they informed us, had been furnished in part from neighboring woods and yards, and some were the rich gift of friendly offerings, bestowed by those who, though absent, were still dear. But "*they were all planted by juvenile hands and nurtured by juvenile care.*" And there they will remain for years, perhaps for ages, the proud memorials of juvenile hours gone by, and labors well employed, to cheer and gladden each of the happy throng who, as life wears its day away, shall look upon them with emotions which will continually waft him back to the hours unknown to care, that were spent in training the gentle shoot, fit emblem of what he then was.

To say nothing of the *general* effect of fitting up a district school with such an establishment as we have noticed, there are two or three particular considerations connected with it of sufficient importance to claim a notice. In the first place, they have a tendency to facilitate the scholars in the sciences they study. Would you impress upon the mind the climate or location of any country, exhibit its mineral or botanical productions, and let them be associated *in the mind* with its geographic locality. So too of seas. What shells are found there, or what fish; and so of every thing and place.

Again, such exercises furnish the mind with an agreeable and healthful employment, and are strictly congenial to the taste of childhood. Did you ever pass by a district school-house in summer and autumn, but what you saw the corners of fences laid out in miniature fields, and fenced with miniature walls, or protected in such other way as youthful fancy dictated?" Have you never seen the turf uprooted by what childish fancy called a plow, and the tender blade of wheat or some other grain springing up in place of the green grass? Have you never seen the rude tools of the young haymaker, and the tiny stacks, which a few snatched moments, taken from study or toil, have enabled him to gather? Oh! who ever saw the operations of childhood without being convinced that the love of rural occupations was an instinctive principle of its nature, and however we may tempt ourselves or be tempted to renounce them in after years, who dares suppose but that we are led from the paths to which they invite us by artificial rather than natural causes.

To the cultivators of the soil, this love of nature, so kindly planted in every bosom, is certainly a desirable quality, and should be cultivated with care in proportion as they would succeed in threading the mazy labarynthine walks of their every day employments. Let it be cherished then in the young botanist who commences dissecting flowers and admiring their colors before he can utter his parents' name, or has power to sustain himself by his own exertion. Teach him, too, when his ear first opens to sweet sounds, and before his tongue can utter perverse sayings, that the birds whose music prompts his mirth and causes him to clap his little hands in joyful glee in chorus to their melody, that these sweet musicians of the grove were sent not only to gladden the heart of man by their pretty warbling songs, but that they are the ministers of his comfort in destroying myriads of insects which would scatter desolation in his path, and destroy his fairest hopes of plenteous harvests.

And when he makes his *debut* in the world of his fellows, and begins to act on his own responsibility on a theatre where *he must act for himself*—when he is passing through the various grades of progress which the *district school* presents, let the lessons already begun, be repeated with new emphasis, so that under their influence his mind with all its pliancy, may expand and take in new objects of kindred and higher import, until at length it shall drink in all of the sublime and beautiful that the natural world affords, or which finite mind under ordinary circumstances can grasp.

Can there be any doubt, but that in a school-room got up in the style we have quoted, where the minds of childhood and youth can relax and unbend themselves in amusements so innocent, healthful, and instructive, a generation of farmers can be educated that will love and adorn their profession? Can it be otherwise than that they should grow up *practical* and *scientific* farmers? We think not, unless conflicting circumstances are *very* strong against them, and we hope the day is not far distant when school-houses everywhere will be got up in the same neat and tasteful style, and school-children shall have their grounds to cultivate, and teachers to instruct them in taking care of them.

There is *one* powerful objection to such a state of things which may well be anticipated;—that is the expense. Yes, many a fond father who would not value an extra five dollars in a perishable dress for a son, or a dozen extra yards of pink ribbon for his daughter, to aid them in the display of perhaps only a single occasion, would think it a gross demand upon his purse to give half the amount to furnish an acre of pleasure ground, where not only his own children, but theirs and others, to all generations, might gather lessons of instruction in their hours of childish pastime; and where the honor and glory of the philanthropy which prompted the warm hearts of parental solicitude in setting apart such grounds for the benefits of the juvenile race, would speak in every leaf that fluttered in the breeze, and every flower that opened its petals to the morning dew.

There is another consideration in favor of thus getting up such establishments, which should not be omitted. The moral influence it would exert would be of a most salutary kind, and would doubtless lay a foundation for rectitude in all future years. The mind of childhood is ever active, and if it is not directed in good and honorable channels its course will be opposite; and if schoolboys can have no better employment, they will spend their time in knocking off hats, robbing bird's nests, or roaming for mischievous plunder over grounds where the restraints of integrity, and the cause of right should preclude their entrance. We need not imagine what sorrowful endings have often closed the unhallowed trains of such slight beginnings. Better remove the temptations by furnishing grounds expressly for their benefit, and employments far more congenial to their tastes, and which will not only furnish them enjoyment now, but fit them for the duties of life awaiting them.

Richmond, Mass., 1846. WM. BACON.

PRESERVATION OF THE MORGAN STOCK OF HORSES

MR. TUCKER—I have seen some articles in your paper in relation to the "Morgan" horses, so called. I have known this stock for several years, and readily concur in most of the statements you have given in regard to their value—especially as to their powers of endurance and excellence as roadsters.

In a late journey through New Hampshire and part of Vermont, I was pleased to learn that considerable spirit is manifested in regard to the preservation of this family of horses. In the vicinity of Walpole, N. H., I found that great pains had been taken by Mr. F. A. Wier, and others, to procure mares having in the greatest degree the blood of the original Morgan horse, and some eight or ten have been collected into one neighborhood, which I was fully assured were from seven-sixteenths to half blood. Two of these mares were stated to be 29 years old, and were got by the first Morgan horse owned by Justin Morgan, of Randolph, Vt., and several others were the produce of parents got by that horse.

Mr. Wier is the owner of the excellent horse called Gifford Morgan, which had just returned from a visit to your State Fair, at Auburn, and the Fair at Troy. This horse is within a trifle of half blood of the original horse; so that by breeding the mares spoken of to him, the blood will be kept up to about as high a point as it has ever attained in any former period. Experiments are also being made with some large and fine mares of the "Messenger" stock, which are rearing foals by this and other Morgan horses; and if these efforts are continued, I have no doubt that in a few years a stock will here be gathered which will be of great benefit to the country. S. W. G.

Boston, Oct. 14, 1846.

[NOTE.—It was stated, in our notice of the death of the *Bulrush Morgan*, in the Cultivator for June last, that he was the last of the progeny of the Justin Morgan horse; it should have been—the last of the *male* progeny, &c.—ED.]

FINE WOOL.

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MR. TUCKER—The intelligent observer of wool-growing, must have perceived during the last few months, that a "crisis" has at length arrived in this important article, long foreseen, however, by the more sagacious. It consists in the error of farmers generally, that because coarse and medium wool formerly paid a fair profit, it would always be so; hence, at length, the over-production of wool of low qualities, and consequently, low prices, that surely follow in all cases where there is a want of equability of supply and demand. But the eyes of all such are now opened to see the fallacy of their anticipations; and this being the fact, the question arises, will they shut them to what is clearly their duty for the future?

To the inert and sceptical, who are slow to believe and act, I will barely state the fact, that three sheep is the average number which can be supported on an acre the year round; and from this data, all can readily calculate the degree of profit realized from growing wool worth only from 16 to 25 cents per lb. Compared with the production of almost anything else within the farmer's range, the conclusion is inevitable, that sheep producing no finer wool are worthless; unless of the mutton varieties, the carcase of which, when well fatted, in the neighborhood of our large towns and cities, will always be in requisition, and profitable to the producer. But it is not my purpose to enter into minute details relative to the comparative profits of growing coarse, medium, and very fine wool, for my time will not at present permit me to do so; but merely to hint the subject for the reflection of all interested. To those who grow indifferent wool, I ask, when it costs no more—nay, not so much—to support a sheep whose fleece will command at the present time, 50 cents per lb., will they keep on their premises such as produce wool of the value of 20, 25, or even 30 cents per lb? The careless and unambitious probably will, but the thrifty farmer who desires an adequate compensation for his labor, will not long submit. The period for aiming to grow the *finest wool* has come, and simply for the reason, because it now is, and will continue to be, the most profitable. But more anon, when convenience will allow me to continue the subject.

My principal object now, is to call the attention of your readers interested in wool-growing, to the splendid flocks of fine-wooled sheep kept in Washington Co., Pa., and the adjoining county of Brooke, in Virginia. It is the opinion of Mr. Lawrence, of Lowell, who has had the opportunity to test the wools of that region, that the blood is of the highest order of excellence; and that several flocks will rival, in all those properties desirable for the manufacturer, some of the most noted of Saxony. No praise could be higher or more unquestionable.

Among those which claim the first attention in point of fineness, is Mr. Samuel Patterson's, of Washington county, whose flock numbers about 1,200. In order to set aside all doubt at once, I will state the fact, that Mr. P. received seventy-five cents per lb. for one hundred of his buck fleeces, (nearly all yearlings,) the present season, purchased by the Northampton Manufacturing Company; and on his authority, received about two months since, he would probably obtain 70 cents per lb., for the residue of his clip. The fleeces of his entire flock have heretofore averaged from 2¼ to 2¾ lbs.; and from the specimens I have seen of the wool of his last clip, it was most thoroughly washed; indeed, with the exception of Messrs. Perkins & Brown's wool, of Akron, Ohio, I have never seen wool so perfectly clean. His process of cleansing is the same as that of Messrs. P. & B., which they should favor the public with a knowledge of.

Within the last week, myself and brother, H. K. Morrell, have received a number of bucks purchased of Mr. Patterson, selected by samples forwarded by letter; and it affords me pleasure to state, that no disappointment has resulted from this mode of purchase. In the language of one who well knows Mr. P., "he is every inch a man," and I have all confidence in stating, that those who buy of him, may safely follow my example. The forms are very symmetrical,—the wool will sort extra and super extra—very compact, and several of them, the staple very long. The base of Mr. P.'s flock is Merino, descendants, for the most part, (as is the case with a number of flocks in his section,) of Gen. Humphrey's importation of 1802; together with choice selections from time to time, from the celebrated flock of the late Messrs. Wells & Dickinson, of Steubenville. For further and more minute information of the pedigree of his sheep, I refer your readers to the Hon. Robert G. Nicholas, of Geneva, and my friend Daniel Rogers, of Hoosic, both of whom have obtained bucks of him within the last year.

For the benefit of those who wish to communicate with Mr. Patterson, I will state that his post-office address is Patterson Mills, Washington Co., Pa.

Yours, &c., L. A. MORRELL.

Lake Ridge, N. Y., Oct. 1846.

PLANTING MOUNTAIN ASH AND CHERRY SEED, &C.

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R. H. Williams, of Westmoreland, N. Y., wishes to be informed relative to the planting of the seeds of the Mountain ash, and cherry stones, so as to secure their vegetation. He states that he planted the berries of the mountain ash in autumn, others he hung up to dry and planted in the spring, and others again he picked from the tree in spring and planted. None grew. They should have been washed from the pulp in autumn, and before becoming dry mixed with twice their bulk of sand and exposed to the weather in a continued moist state till spring. The most convenient way of doing this is to bury them in a cotton bag, after mixing with sand, just beneath the surface of the soil. Early in spring they are to be planted in a bed of the richest garden mould, not more than half an inch deep, and if the soil is not decidedly sandy, a sandy compost must be made to cover them, otherwise a crust will form by rains and drying, and prevent the young plants from pushing through. If the seeds are left in the pulp through winter, they ferment, and are killed.

The same correspondent states that he planted plum and cherry stones in autumn, but none grew. The probable cause of failure, was the drying of the stones, by too long exposure to the air. They must be planted in moist soil, or mixed with moist sand, immediately after taking from the fruit.

He also inquires the proper time and manner to trim currant bushes. Early in spring is a suitable time for pruning, but it may be done in autumn and through winter. All suckers should be prevented from growing, as by producing a thick mass of brush they lessen the size of the fruit. Old and superabundant branches are also to be thinned out. There is, however, one or two other requisites in currant culture more important than pruning. These are to renew the bushes by planting new ones, after the old ones become seven or eight years old; and to give them a rich soil, and deep, mellow, and constant culture. By these means, the fruit will be more than triple the size of that grown on old unpruned bushes, growing neglected in grass and weeds.

RENSSELAER CO. AG. SOCIETY.

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WE had the pleasure of attending the exhibition of this society, which took place at Troy on the 23d and 24th days of September. Considered in all respects, we have seldom seen the exhibition equalled by any county society. The animal were numerous, and in many instances of marked excellence. The mechanical department—including farm implements, carriages of almost every description, stoves of all patterns and for all purposes, cabinet ware, manufactures of leather &c. was highly attractive and creditable, both for extent and quality. The household products, and ladies' department, presented a very rich and varied display which would have done honor to any association.

There was a good display of fruits and flowers. We noticed specimens of very fine pears from ELWANGER & BARRY Rochester, and also several fine kinds from H. WENDELL, Esq., Albany; also apples, pears, and enormous quinces, from H. BURDEN, Troy; beautiful samples of the Isabella, Catawba, Winne, and White sweetwater grapes, from Messrs. HART and others, of Troy. A. WALSH, Esq., Lansingburgh, presented *pea-nuts*, the growth of his garden.

The cattle were very numerous, and among them were some really fine animals. From the herd of GEO. VAIL, Esq we noticed a lot consisting mostly of cows and heifers the greater portion of which were only presented for exhibition. Among them was his fine imported Durham cow, Lady Barrington, which received the first premium at the late State Fair. We observed, also, a fine Durham cow owned by Mr. JOS. HASWELL, of Hoosick, and one which we understood to be owned by Mr. WILLARD, of Troy. These cows, we are informed, were bred by Judge BALL, of Hoosick. They would certainly do credit to any breeder. There was a very good Durham bull presented by WM. HALL, Troy.

Among the fat cattle we noticed two yoke of very heavy oxen, owned by A. PINE, Pittstown; another yoke owned by AUGUSTUS LESTER, Troy.

The show of swine was particularly good. We observed some excellent pigs of the Berkshire and Grass breeds, owned by Mr. WILLARD, of Troy; a very fine young boar of similar blood, owned by J. B. FORD, Troy; a Berkshire sow and litter of pigs, owned by ISAAC TALLMADGE, Schaghticoke two litters of very superior pigs, Berkshire and Leicester breeds, owned by D. S. GREENE, of Brunswick.

Of sheep we noticed good specimens of the mutton breeds, owned by W YOUNGHANS, Brunswick, L. BROWNELL, Pittstown, and J MINNICK, of Sand-Lake; and specimens of fine wooled sheep, (Merinos and Saxons) from Messrs. HASWELL, of Hoosick, TALLMADGE, of Schaghticoke, and BROWN, of Pittstown. There was shown a fleece of very fine wool, said to be worth "one dollar per lb." by JOHN KERR & Co., Troy.

In horses the show may be said to have been uncommonly good. The competitors were numerous, and there were several fine animals which were only for exhibition We noticed a yearling colt of remarkable size and points, got by Mr. LONG'S Sir Henry; a handsome black stallion owned by JNO. M. FONDA, Troy; several pair of fine matched horses, especially, a pair belonging to Mr. VAN ARNUM of Troy, and others, whose owners' names we did not learn.

Among the horses for exhibition only, was the Gifford Morgan, 20 years old, owned by FREDERICK A. VIER, of Walpole, New Hampshire. He attracted the same marked attention here that he did at the State show.

Mr. CALVIN MORSE, of Lansingburgh, presented his horse called "Norman, or Morse's Grey," (which has heretofore received the first premium of this society,) with 14 of his progeny, exclusive of several young foals. We gave a cut of this horse in our No for May last. There is no doubt that his stock make valuable horses. It would be difficult to find the same number from any one horse of equal merit with the fourteen we have mentioned [illegible] hardy, good tempered strong constitutioned animals, well calculated for the road, and many of them showing extraordinary traveling powers. We noticed particularly (among the lot of fourteen) a very superior young gelding, owned by H H. STEENBURG, of Troy, which received the first premium, and which as as a traveller it would be "hard to beat."

C. T. BOTTS, Esq., of Richmond, Va., editor of the *Southern Planter*, saw Mr MORSE'S horse last spring, and afterwards made some remarks in reference to him, from which we make the following extracts. Mr. B. rode several miles in a buggy drawn by this horse. "His action, (and as Demosthenes said of the orator, action is everything,) is superb. What an acquisition this horse would be to the stock of Virginia! We have a great many thin, slab-sided, thorough-bred mares; what there is of them is good, and what they can do they will do all the time, but they want strength and filling up in the flank and loin, and we have never seen a horse better adapted to cross upon them than this dapple grey of Mr. Morse's." He pronounced him besides, "the finest and safest sulky or buggy horse it was ever his fortune to sit behind."

TEN VARIETIES OF STRAWBERRIES.

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DESCRIBED BY WM. R. PRINCE, OF FLUSHING.

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Crimson Cone is an exceedingly vigorous variety, with very tall petioles and large foliage; flowers staminate; fruit in profuse trusses on long peduncles, the berries brilliant dark scarlet, highly fragrant, remarkably beautiful, and striking beyond any of the usual varieties the seeds very deeply imbedded, ripens with the later varieties, at the same period as the Hovey, Hudson, and Methven. At market this variety commands the very highest price. Indeed, the fruit is so beautiful and showy and the crops so abundant, that it may be deemed one of the most desirable of the whole family.

Primordian is a new very early variety, of vigorous habit, the flowers pistillate, the berries crimson, larger than the large early scarlet, of conical form, ripening about the same period as that variety. It is exceedingly productive, the fruit in profuse clusters, of a fine color and very showy It may be deemed the most prolific and estimable of all the early varieties for the markets, or for small gardens.

Crimson Pine is a new variety with large vigorous foliage, flowers staminate, berries large dark red, but not of the deepest color, conical pointed form, but some are obtuse or rounded at the extremity, of fine flavor, and rather early; it assimilates in growth and appearance to the Hudson's Bay.

Unique, a vigorous new seedling variety, originated by ourselves, in 1845; the flowers staminate; the fruit scarlet, of most peculiar form, being purse-shaped, with a short neck, sweet and delicate [illegible] is very prolific, and much esteemed by those who have tasted the fruit.

Bishop's Seedling, of the London Hort. Society, is a very healthy rapid growing plant; the petioles are long, but not as strong, nor the foliage as large as some of the most robust varieties; the flowers are pistillate the fruit of medium size; roundish ovate form, a beautiful orange scarlet color, firm, and of a rich acid flavor; it is borne on long peduncles in very profuse clusters, and when the foliage is pressed aside, the bed seems literally covered with fruit; it is one of the latest at maturity, and a very hardy variety.

Montevideo Pine is a vigorous plant, and the largest in its dimensions of all the varieties that I have seen; the petioles strong and downy, leaves broad, peduncles large, and the flowers the size of a dollar, and staminate; the fruit is the largest average size of all the varieties, of perfect regular conical form, rich scarlet, remarkably showy and splendid. The berries continue ripening in succession for 3 to 4 weeks, from the middle of June to the middle of July, it being one of the latest of either the Pine or Scarlet classes

Hudson, (of Cincinnati,) is of vigorous growth and luxuriant foliage, and rapidly covers a bed with its runners; the flowers pistillate, the berries ovate-pointed, without a neck, of the same color and nearly the same form as our common Hudson, and of good flavor. It is remarkably productive, and perhaps only equalled by our Hudson, and by the Crimson Cone, Bishop's Seedling, and a few others, and is a very desirable variety for supplying the markets. This plant greatly resembles in its growth and general appearance our ordinary Hudson strawberry, and is no doubt closely allied to it.

Hudson, or Hudson's Bay, is an old variety that has for a long period been extensively grown for the New-York markets. It is of very vigorous growth, and is one of the few garden varieties that combine distinct staminate and pistillate plants, and it was this variety which the late Wm. Prince was in the habit of planting more than thirty years ago, in beds composed of one of the former to ten of the latter sex, which course was urged upon cultivators in the short treatise on Horticulture published in 1828. The wisdom of that suggestion has at this late day become fully proven, by its general adoption throughout the whole family of strawberries, wherever the organs are unsexual or abortive without the fertilization by a proximate variety of the proper character. The fruit is large, approaching to ovate, and pointed, with a neck, often hollow with a core, and when fully ripe is of a dark, rich, shining red, the flesh pale scarlet, firm, and well suited for carriage, and only tolerable, with much acidity before fully ripe, but at perfect maturity it is sweet and well flavored, and especially so in a hot season. The point of the berry remains green until the other portion has reddened, but becomes red when mature, by which the proper period for gathering it can be ascertained. This variety has been condemned in England, because that humid climate is inappropriate to perfecting its maturity, and by others in this country who have eaten it in an immature state. It requires our powerful sun to perfect it, and although it must be ranked among the coarser varieties, it is nevertheless of a very good quality when eaten in a perfectly ripe state, having then only a slight acidity, which renders it pleasant in a sugared state. The fruit is very showy, and one of the best for preserves.

Green Strawberry, is allied to the Hautbois family more than to any other, but appears to be of entirely distinct origin. It is readily distinguished by its peculiar foliage, which is of a varied green hue, more delicate, and less rugose than the Hautbois class; the flowers are perfect; the fruit is roundish flattened, of medium size, and some berries small, whitish green tinged with reddish brown over two-thirds of its surface at its full maturity; flesh solid, pale greenish, of a pleasant and most peculiar musk flavor. The berries are on very flexile peduncles, and when ripe, unlike the Hautbois varieties, they are entirely concealed by the foliage. It is the latest of all except the Alpines.

Buist's Prize is a new seedling variety; the flowers staminate, and each section of the calyx has three segments; berries large and closely resembling the drawing issued by Mr. B.; its greatest diameter being at the centre, and terminating in a sharp point; it is of good flavor, ripening about the medium period.

WATERING GARDEN PLANTS.

THE past season has been remarkable for its heat and moisture, and has consequently greatly favored the growth of plants. Yet the importance of a copious watering has been very strikingly shown by a row of Red Antwerp Raspberry, a part of the row standing on manured land in open ground, and a part under the eaves of a woodhouse and on its northwest side. The shoots of those in open ground have grown this year about four feet; a small part have grown five feet. Those under the eaves of the wood house have grown from seven and a half to eight feet, and are much more numerous.

This experiment shows the importance of attention to some efficient system of irrigating gardens.

VERMONT AGRICULTURAL SOCIETIES.

IN none of the states of the Union, is there manifested a more general and energetic spirit of improvement in every branch of rural economy, than in Vermont. The zeal with which agricultural societies, which are organized in almost every county, are there sustained, is evidence of the advancement which the good cause is there making. We have already received several accounts of the exhibitions which have been held in various parts of the state, the present fall, of which we give herewith, a brief abstract.

The Chittenden Co. Society held its exhibition at Burlington, on the 24th September. The stock, particularly the neat cattle and horses, were said to be greatly superior in excellence and beauty to those of any previous exhibition. The horticultural department was also well filled. Fine specimens of grapes, melons, and other fruits were shown. Of domestic manufactures, there was a large and good display.

The Rutland County Society held their show at Castleton, on the 24th September. Every department appears to have been well filled, and the interest felt by the citizens in the labors of the Society, was evinced by the numbers which assembled on the occasion—it being, as stated, "by far the greatest gathering ever witnessed in Rutland County."

The Addison County Society held its exhibition at Middlebury, on the 30th September. The *Galaxy,* in reference to the show, says "no agricultural fair has come off more to the satisfaction of those in attendance." The show of sheep is said to have been the best ever made in the county. The show of neat cattle is also spoken of as having been fine, and the display of horses indicated an evident improvement in this valuable description of stock. The in-door departments, manufactures, fruits, &c., are highly spoken of.

The Caledonia County Society's exhibition, we have not received an account of. This spirited society ordered seventy-five copies of the Cultivator for distribution as premiums and gratuities.

The Windham County society held its exhibition at Brattleboro, on the 7th and 8th of October. The meeting is spoken of as having been one of great interest. According to the *Phœnix,* published at Brattleboro, it was a superior exhibition to any before holden in that county, and was attended by a very large crowd of "citizen-farmers, with their wives and daughters." The meeting is said to have been "characterized by great harmony of feeling, and increased zeal in the great cause of agriculture."

IMPROVED STOCK IN ENGLAND.

Mr. WM. FISHER HOBBS, of Mark's Hall, Essex, lately disposed of the greater portion of his live stock, consisting of Hereford cattle, Leicester sheep, and improved Essex pigs, by a sale at auction. The cows averaged 25 guineas, bull calves 11½ guineas. The Leicester rams brought 7¼ guineas per head, ewes 48 shillings (sterling) per head. Lambs, a cross of the Leicester and South Down, 31 shillings per head. Of swine, the boars brought 10 guineas, the sows 15 guineas each.

A part of the herd of Short Horn cattle, formerly belonging to the late Earl SPENCER, and by him willed to Mr. HALL, his bailiff, has been lately sold. Some of them brought very high prices; a yearling bull sold for 370 guineas, and his dam for 132 guineas. A bull calf was sold to the agent of the French government for 225 guineas. The celebrated Short-Horn bull "Capt. Shafto," formerly owned by Mr. LOFT, has lately been bought by Mr. PARKINSON, for 325 guineas.

We find in another paper an account of the annual sale and letting of rams of the improved Cotswold breed, by Mr. HEWER, of North Leach, Gloucestershire. Mr. H. has been known as a sheep-breeder for upwards of twenty years, and the stock offered on this occasion are stated to have been equal in quality to any he had ever produced. There were four sheep offered for letting, and one of those, a shearling, made 41 guineas. There were also 41 sold; the average of the whole 45 amounting to 15*l.* 12*s.* 8d. per head.

It seems to be the opinion of many in England, that for weight and value of fleece, early maturity, and quantity and quality of meat, combined, no breed is more profitable than this.

One of the plates of the *Farmers Magazine* for September, represents three beautiful Leicester rams bred by Mr. ROBERT SMITH, of Burley-on-the-Hill, Rutland. The drawings appear to have been taken just after the sheep were shorn, and therefore exhibit their true form, undisguised by wool. One of the three whose portraits are given was sold to Mr. BENNETT, of Bedfordshire, for £120. The three engraved portraits were taken from a group of seven which had been painted for Mr. SMITH, which sold, in the aggregate, for 700 guineas. Sixty of his rams sold in September, 1845, at an average of 19 guineas each. Mr. S., it is stated, has received at least 50 premiums by this flock, from various agricultural meetings.

LIST OF PREMIUMS,

Awarded at the N. Y State Fair, Auburn, Sept., 1846.

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[Concluded from our last.]

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BUTTER.

Greatest quantity made from five cows in 30 days—1st, E. R. Evans, Marcy, $25; 2d, A. C. Crocker, Union, $15.

Best 25 pounds made in June—1st, Joseph Baker, Otisco, $10; 2d, Wm. Ottley, Phelps, Col. Tour; 3d, Elisha Sheldon, Homer, Vol. Trans.

Best 50 pounds made at any one time—1st, Joseph Baker, $15; 2d, A. C. Crocker, Col. Tour; 3d, Abram Adams, Preble, Silver Medal; 4th, Elisha Sheldon, Homer, Diploma; 5th, John G. Wheeler, Sennett, Vol. Trans.

CHEESE.

Best 100 *lbs. one year old and over.*—1st and 2d, no awards; 3d, Robert Eells, Oneida Co., Silver Medal; 4th, Wm. Ottley, Ontario Co., Diploma; 5th, H. N. Washbon, Otsego Co., Vol. Trans.

Best less than one year old.—1st, no awards; 2d, Robert Eells, Col. Tour; 3d, Wm. Ottley, Silver Medal; 4th, Isaac Bucklin, Cayuga Co., Diploma; 5th, Anthony Shaw, Scipio, Vol. Trans.

SUGAR.

Best Maple.—1st. Benj. Gauss, Jr., E. Bloomfield, $10; 2d, Moses Eames, Rutland, $5; 3d, Erastus Bigelow, Sangerfield, Diploma; 4th, U. E. Talman, Tully, Vol. Trans.

SILKS.

Manufactured.—Clark Avery, Perryville, $15.

Sewing Silk.—1st, Clark Avery, $10; 2d, Joseph Belcher, $5; 3d, David Irish, Diploma; 4th, N. M. Coburn, Vol. Trans.

Reeled Silk.—1st, Joseph Belcher, $5; 2d, N. M. Coburn, Diploma; 3d, David Irish, Vol. Trans.

Cocoons.—1st, N. M. Coburn, $10; 2d, Jos. Belcher, Col. Tour.

DOMESTIC MANUFACTURES.

Woolen Blankets.—1st, Wm. Ottley, Phelps, $5; 2d, F. P. Brown, Elbridge, $4; 3d, Geo. W. Henry, Martinsburgh, $3.

Flannels.—Albert L. White, $5; 2d, Clark Avery, $4; 3d, Wm. Ottley, $3.

Woolen Cloths.—1st, M. W. Priest, Little Falls, $5; 2d and 3d, O. Kellogg, Skaneateles, $4, and $3.

Woolen Carpets.—1st, Jonathan Conger, Groton, $5; 2d, No. 474, owner unknown to the committee, $4; 3d, D. C. Monroe, Elbridge, $3.

Tow Cloth.—A. Shaw, Scipio, $3.

Linen.—1st, A. Pine, Pittstown, $5; 2d, F. P. Brown, Elbridge, $4; 3d, E. W. Bateman, Venice, $3.

Linen Diaper.—1st, A. Pine, Pittstown, $5; 2d, Margaret Jeffery, Truxton, $4; 3d, Geo. W. Henry, Martinsburgh, $3.

Linen Thread.—R. S. Ransom, Perryville, $2.

Hearth Rugs.—1st, Hotchkiss & Smith, Auburn, $5; 2d, J. Barber, Auburn, $4; 3d, Miss A. R. Smith, Vernon, $3.

Double Coverlets.—1st, Caroline C. Jones, Westmoreland, $4; 2d, C. R. Nichols, Darien, $3; 3d, C. Britt, Perryville, $2; 4th, J. Conger, Groton, Vol. Trans.

Woolen Stockings.—1st, Margaret Jeffrey, Truxton, $2; 2d, Mrs. Greenleaf, Watertown, Vol. Trans.; 3d, David Thomas, Aurora, Diploma.

Wove Woolen Stockings.—Miss L. C. Morris, Auburn, $2.

Kersey.—1st, C. Britt, Perryville, $3; 2d, R. S. Ransom, $2; 3d, A. Pine, Pittstown, Vol. Trans.

Linen Knit Stockings.—1st, Chester Gridley, Sennett, $2; 2d, E. W. Bateman, Venice, Vol. Trans.; 3d, J. L. Eastman, Lodi, Diploma.

Knit Cotton Stockings.—1st, 2d, and 3d, L. C. Morris, Auburn, $2, Vol. Trans., and Diploma.

Bed Quilts.—1st, Rebecca Johnson, Syracuse, $5; 2d, L. C. Morris, Auburn, $3; 3d, B. F. Hawks, Phelps, $3.

Rag Carpets.—1st, Wm. Ramsey, Elbridge, $3, 2d, Geo. Hawley, Auburn, $2; 3d, Abram Adams, Preble, Vol. Trans; 4th, Jonathan Paddock, Aurelius, Vol. Trans.

FRUIT.

Table Apples.—1st, Benj. Hodge, Buffalo, $5; 2d, A. Bryant & Son, Buffalo, $3; 3d, C. Parvis, Greece, Vol. Trans.

Best twelve sorts.—J. C. Hastings, Clinton, $3.

Seedling Apple.—Isaac Hildreth, Geneva, $3.

Table Pears.—1st, Elwanger & Barry, Rochester, $3; 2d, Benj. Hodge, Buffalo, Vol. Trans.

Winter Pears.—Elwanger & Barry, Rochester, Vol. Trans.

Quinces.—Geo. Underwood, Auburn, Vol. Trans.

Native Grapes.—Edward Thomas, Geneva, Vol. Tr.

Foreign Grapes.—Chester Parsons, Skaneateles, Vol. Trans.

Best Peaches.—Bissell & Hooker, Rochester, Vol. Trans.

Plums.—G. F. Pratt, Buffalo, Vol. Trans.

FLOWERS.

1st, James Wilson, Albany, Silver Medal; 2d, Prof. J. W. Jackson, Schenectady, Diploma; 3d, Elwanger & Barry, Rochester, Vol. Trans.

Seedling Dahlias.—1st and 2d, Edward Thomas, Geneva, two Diplomas.

Best twenty-five varieties of Dahlias.—1st, James Wilson, Albany, Silver Medal; 2d, Elwanger & Barry, Rochester, Diploma; 3d, Prof. Jackson, Schenectady, Vol. Trans.

Best Floral Ornament.—James Wilson, Albany, Silver Medal.

Bouquets.—1st, James Wilson, Albany, Col. Tour; 2nd and 3d, L. Menand, Albany, Diploma and Vol. Trans.

Green-House Plants.—1st, Mrs. M. Miller, Auburn, Diploma; 2d, Miss H. C. Morse, Skaneateles, Vol. Trans.

German Asters.—Prof. Jackson, Schenectady, Vol. Trans.

Best twelve Roses.—1st, James Wilson, Albany, Diploma; 2d, Elwanger & Barry, Rochester, Vol. Trans.

Discretionary Premiums for Floral Ornaments.—Diplomas were awarded to Mrs. E. T. Throop Martin, Willow Brook; Elihu Tyler, Buffalo; Elwanger & Barry, Rochester; Prof. Coppock, Buffalo; Wm. Webb, Buffalo; Benj. Hodge, Buffalo; Henry Morgan, Aurora.

VEGETABLES.

Water-Melons.—H. N. Langworthy, Rochester, Col. Tour.

Musk-Melons.—Geo. Cooper, Irondequoit, Vol. Trans.

White Carrots.—C. F. Crossman, Rochester, Vol. Trans.

Field Carrots.—J. H. Osborn, Mentz, Vol. Trans.

Beets, (long blood.)—C. F. Crossman, Rochester, Vol. Trans.

White Parsneps, White Table Parsneps, and Cabbages.—Geo. Cooper, Irondequoit, three Vols. Trans.

Tomatoes and Egg-Plant.—C. F. Crossman, Rochester, two Vols. Trans.

Sweet Potatoes.—H. G. Dickinson, Vol. Trans.

Lima Beans.—Ira Hopkins, Auburn, Vol. Trans.

Parsley.—Geo. Cooper, Irondequoit, Vol. Trans.

Squashes.—H. G. Dickinson, (one weighing 80 lbs,) Vol. Trans.; Hiram Hubbard, Canandaigua, (Six from one seed, weighing 575 lbs., and one of which, $146\frac{3}{4}$ lbs.,) Vol. Trans.

Pumpkins.—C. Moses, Skaneateles, Vol. Trans.

Seed Corn.—Chester Gridley, Sennett, Vol. Trans ; John Thompson, Ledyard, Vol. Trans; J. F. Osborn, Mentz, Vol. Trans.

Mangel Wurzel.—James Rattle, Sennett, Vol. Trans.

Sugar Beets.—J. F. Osborn, Mentz, Vol. Trans.

Discretionary Premium—For beets, carrots, and millet, Thos Ogden, Vol. Trans.

Discretionary Premium—For sweet corn and red peppers, A. Custin, Vol. Trans.

Best Table Potatoes.—C. R. Nichols, for Mercers, $2; C. F. Crossman, for Long Pink-Eyes, Vol. Trans.; J. F. Osborn, for Long Pink Eyes, Vol. Tr.

Seedling Potatoes.—N. S. Smith, Buffalo, for Pink Eyes, $5; the same for four varieties, Col. Tour.

WHEAT.

R. Harmon, Wheatland, (three varieties,) Vol. Trans.; Martin Smith, White Flint, $5.

BEE HIVES.

Aaron Colton, Pittsfield, Vermont, $5; Wm. R. Kelsey, Starkey, N. Y., Vol. Trans.

STOVES, &c.

For Cooking.—1st, Jackson & Phelps, Syracuse, (Buck, No. 8,) for Hotels, Diploma; 2d, D. E. Stafford, (Telegraph,) Silver Medal; 3d, Anthony Davy & Co., Troy, (Washington Air-Tight,) six sizes, Diploma.

Parlor Air-Tight.—1st, Atwood, Cole & Crane, Troy, Silver Medal; 2d, Wager & Dater, Diploma; 3d, J. S. & M. Peckham, Diploma.

Stove Hollow Ware.— —— Hoag, Schenectady, (5 pieces,) Vol. Trans.

IMPLEMENTS AND MACHINERY.

Reaping Machine.—C. H. McCormick, Rockbridge Co., Virginia, $5.

Stump Machine.—R. H. Hall, Owego, $10.

Grain Planter and Sowing Machine.—P. Seymour, E. Bloomfield, $5.

Sowing Machine.—W. H. Jones, Bridgeport, Ct., Diploma.

Flax-Pulling Machine.—H. Hill, Diploma.

Bells.—A. J. Meneely, West Troy, Diploma.

Door-Lock and Bell-Pulls.—Dana & Price, Utica, $5.

Rockaway Buggies.—Allen & Carpenter, James Gould & Co., Albany, Diplomas.

Double Acting Force Pump.—Phelps & Messenger, Oneida, $3; H. G. Madison, Syracuse, Diploma.

Fire Engine.—Calvin Young, (16 yrs old,) Auburn, $5.

Balance Slide Farm Gate.—H. White, Kirkland, $3; S. Benham, Camillus, Diploma.

Portable Bedstead.—James Hazlett, Utica, $3.

Refrigerator, and Shower Bath.—E. Taylor, Rochester, $5.

Horse-Yoke.—E. H. Danforth, Busti, $3.

Leather Dressing Machine.—S. Wilson, Dansville, $3.

Imitation Graining.—F. Van Doorn, Rochester, $3.

Smut Machine.—Wilson & McCullough, Syracuse, Diploma.

Buckwheat Cleaner.—Daniel Pease, Jr., Diploma.

Mill for Sawing Siding.—Nelson Peck, Lyons, Diploma.

Portable Grist Mill.—J. H. Bristol, (Fitzgerald's patent,) Diploma.

Hay Scales.—J. F. Keeler, Cazenovia, $5.

Ox-Yoke.—E. Sheldon, Sennett, Diploma.

Rock Drilling Machine.—Richard Dibble, Rochester, Diploma.

Buggy-Wagons and Chariotees.—John W. Bates, Utica, Diploma.

Wagon-Wheel.—J. C. Royce, Cuylerville, Diploma.

Compound Carriage Wheel.—Norman Reede, Onondaga, $3.

Self-Acting Cheese Press.—W. C. Pratt, Weedsport, Diploma.

Seraphines.—Upton & Miller, Rochester, Diploma.

Whips.—W. R. Strong, Rochester. Diploma.

Sofa and Card-Tables.—Chas. Rust & Son, Syracuse, Diploma.

Portable Hunting and Fishing Case.—Wm. Gardner, Geneva, Diploma.

Stove Pattern Carving.—J. F. Seymour, Utica, Diploma.

Boot Crimping Machine.—J. H. Ladue, Cato, $3.

Mustard, and Paste Blacking.—D. Murdock & Co., Albany, Diploma.

Saddlery and Hardware.—Hasson Frazier, Syracuse, $3.

Harness and Bridles—P. Williamson, Skaneateles, Diploma; F. A. Keeler, Albany, Diploma; C. H. Wheaton, Homer, Diploma.

Butter Firkins.—Abram Sherman, Summer Hill, $2.

Model Steam Engine.—D. D. R. Ormsby, Homer, Diploma.

Card Printing Press.—F. A. Marsh, Diploma.

Hand-Power Planing Machine.—Andrew Parker, Auburn, Diploma.

Morticing Machine.—Benj. H. Otis, Syracuse, Diploma.

Revolving Bellows.—Jerome Darling, Adrian, Mich., Diploma.

Drill Sawing Machine.—Pennock & Pierce, Chester Co., Pa., Diploma.

Sculpture in Wood.—J. Sangster, (14 yrs. old,) $5.

Sash Lock.—James Jones, Rochester, Diploma.

PAINTINGS AND DRAWINGS.

W. M. Beauchamp, Jr. Skaneateles, Diploma; Miss Cox, for Pencil Drawing Diploma; Miss Conkling, for Crayon Pencil Drawing, Diploma.

MISCELLANEOUS FANCY ARTICLES.

Shell Work.—Miss L. C. Morris, Auburn, $3.

Wax Work--Miss L. C. Morris, $5, and Diploma; Mary F. Snow, $3.

Neeule Work.—Fire Screens.—Delia M. Colvin, Syracuse, $5; Lydia S. Russell, $5.

Ottoman Covers.—Delia M. Colvin, $3; F. E. Thornton, Fleming, $3; Mrs. N. M. Stephens, Elbridge, $3, and Diploma.

Table Covers.—Mrs. Geo. W. Patterson, Chautauque Co., $4 and Diploma.

Groups of Flowers.—Mr. John Porter, Auburn, $3.

Lamp Mats.—Mrs. W. G. Pierce, Auburn, $3; Mr. Brockway, Brockport, for variety of worsted-work, Diploma.

Worsted Rugs.—Mrs. Lucas, Auburn, $4; Mrs. Roxana Cottle Hurston, Buffalo, $2, and Diploma; Cornelius Walcott, Elbridge, $3.

Fancy Chairs.—Mrs. Sarah Harbottle, Auburn, $1; Joseph Sabin, Syracuse, Diploma; Ladies of Utica Female Academy, $3, and Diploma.

Handkerchiefs, Caps, &c.—Mrs. V. R. Voorhees, Amsterdam, $3; Miss Abby Allen, Camden, $3; Miss Green, Jordan, (child's dress,) $1.

Fancy Painting and Needle Work.—Mrs. Wm. A. Dutcher, Milo, $3, and Diploma.

Embroidered Shawls.—Mrs. Alanson Benson, Skaneateles, $3; Mrs. John G. Wheeler, Sennett, (Thibet cloth,) $3.

Embroidered and Stuffed Quilts.—Mrs. Joseph Beach, Auburn, $3; Mrs. Rebecca Johnston, Syracuse, $2; Mrs. Roxanna Cottle Hurston, Buffalo, Diploma; Mrs Hiram Hubbard, Canandaigua, $3; Mrs. Eliza Harmon, Wheatland, $2; Miss Mary J. Patty, Auburn, $2, and Diploma; Mrs. D. C. Munroe, Elbridge, $3; Mrs. Eliza Harmon, Wheatland, $2; Mrs. Wm. C. Sheer, Phelps, Diploma; Mrs. C. A. Frost, Delhi, Diploma; Miss L. C. Morris, Auburn, $1.

Silk Patch Piano Cover—Miss Harriet A. Williams, Rochester, $2, and Diploma.

Embroidered Silk Suspenders.—Mary C. Van Buren, Albany, $3, and Diploma.

Ornamental Bead Bell-Rope.—Mrs. Millard Fillmore, Buffalo, $5, and Diploma.

Fringe Mittens.—Mrs. S. T. Stebbins, Homer, $1, and Diploma.

Lace Veils.—Miss Abbott, Auburn, $3.

Worsted Card Port-Folio.—Miss Matilda Davis, Buffalo, $2.

Ornamental and Domestic Needle Work.—Mrs. V. R. Voorhees, Amsterdam, Diploma, and for Table Cover, $2, and Diploma.

Bonnets.—Mrs. Cook, Syracuse, $3, and Diploma; Mrs. F. H. Graham, Auburn, Diploma; Miss Atwood, Salem, $5, and Diploma.

Lace Caps and Capes.—Mrs. Cook, Syracuse, $3, and Diploma.

Fancy Worsted Chain.—Miss Mary F. Snow, Auburn, Diploma.

Lamp Stand.—Mrs. B. F. Hawks, Phelpstown, Diploma.

Silver Ware, Pens, &c.—Willard Hawley & Co., Syracuse, $5, and Diploma; F. W. Maffit, Syracuse, $5, and Diploma; B. R. Norton, Syracuse, (for Gold Pens,) $5, and Diploma; Washburn & Robinson, Taunton, Mass., (for Pen-Nibs,) Diploma; S. N. Smith, Auburn, (for Dental Work,) Diploma.

Weather Strip for Doors.—Wm. Genett, Syracuse, (Gifford's Patent,) Diploma.

PLOWING MATCH.

1st. Davis Cossit, Onondaga, $15; 2d, Azarial Letts, Ulysses, $12; Henry Willard, Cayuga; $10; L. C. Pratt, Salina, Col. Tour; J. B. Gaylord, Auburn, Vol. Trans. JOSEPH ALLEYN, Ass't. Sec'y.

OSAGE ORANGE.

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WM. NEFF, Esq., in a communication to the *Ohio Cultivator*, says he has long since come to the conclusion that the Osage orange, is decidedly preferable to any other plant for hedging.

"The plants," he observes, "are best propagated from the seed, which I have always planted in the spring, (from not having been able to get them in the fall,) in a nursery, in broad drills, about a foot apart, the seed scattered and separated an inch or two in the drills. My experience, however, plainly tells me that they should be planted in the fall, as when planted in the spring they vegetate but sparingly, and oftentimes many spring up the ensuing season, from the seed which had laid in the ground a year."

The seeds, he says, can be obtained in any quantity in the neighborhood of Columbus, Hempstead county, Arkansas, for the mere expense of gathering. He states that in one quart there are about eight thousand seeds. The plant is said to be very hardy, and when once vegetated is sure to grow.

"The plants may also be favorably propagated from the trimmings of the roots when taken from the nursery to set in the hedge. They may be cut in small pieces, only two or three inches long, and planted in drills with the end barely covered by the soil. They will be sure to grow, unless they have been too much exposed, and suffered to become dry, which should be carefully avoided by covering with earth till ready to plant.

"At one year old, they may be transplanted to the hedge, or at two years they are stronger and better, and give more spare roots to propagate from. I have not found the fall planting to succeed well—the spring is far preferable.

"At a year old, whether they remain in the nursery or set in the hedge, they should be cut off within one or two inches of the ground; the next spring six inches; and about the first of July about fifteen inches; and if not in July, then the following spring, after which they will require but little more than side and extreme top pruning. Or the hedge may be thickened, and some of the above pruning avoided, and perfected sooner, and perhaps as desirably, both for utility and beauty, by careful intertwining of the lower branches; the numerous thorns will prevent any change of their places.

"In making the hedge, the ground should, of course, be well prepared the previous year, and in the early spring well plowed and harrowed, till quite mellow. The line is then laid, and a trench formed with a spade deep and wide enough to admit the roots; plant in two rows, six inches apart, and twelve inches apart in each row, diagonally, so that the double row makes the plants equal to six inches apart in one line. The distance between the plants can be well preserved, by first preparing a stick cut in niches at every six inches, and laid alongside the trench, which, being straight on the one side, will govern one row, and the eye will direct the other with sufficient accuracy. The plants having been taken up and properly pruned of the tops and roots, are scattered along the trench, and a man or boy, taking one in each hand, puts them in their places in the trench, while another stands with the shovel of well pulverized earth, which he carefully casts upon the roots, and thus they proceed on; afterwards fill in and press the earth to the roots with the hand or foot. When all are set, by means of a more elevated line, and a good eye, they may be pressed to a perfect straight line. Dress your ground, and all is done till the weeds and grass want eradicating. It is a general error in rearing trees, &c., to suppose the work done when planted. It is worse than labor lost, unless afterwards cultivated and protected beyond the reach of the stock, grass, and weeds; nay, it is downright waste."

EXPORTATION OF AMERICAN WOOL.

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HAMILTON GAY, Esq., of New-York, in a letter to the *Journal of Commerce*, states that the chief obstacle to the success of American wool in the English markets, is its unclean condition, and not a prejudice against the article, merely because it is American. He says our wool has not only been shipped in bad condition, "each fleece by itself considered, but long wool and short wool, the weak and the strong, the coarse and the fine, the felting and clothing qualities, have been mingled in the same sack, with a degree of knowledge and judgment about equal to that which would characterize the conduct of a farmer who should send his wheat, corn and oats to market, mixed together in the same bag." This he is confident has much depressed its value in England, for "nowhere," says he, "is property so carefully examined and so correctly estimated before purchasing, as in that country; and no where else does a good article of its kind, in good condition, bring so high a relative price; and nowhere are such heavy deductions made and allowed for fraud and ill condition."

He states the consumption of England to be about two hundred millions of pounds annually, three-fourths of which is the growth of Great Britain, and the balance is said to be "imported from every climate of the earth, duty free." He thinks all must agree, "that hereafter the prices of our wool must be regulated principally by its export value"—that "it must be so to enable our manufacturers to compete with foreign rivals, as well as from the abundant supply."

SALE OF AYRSHIRE STOCK.

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THE sale of Capt. GEO. RANDALL's herd of Ayrshires took place at New Bedford, on the 6th of last month. We are indebted to a gentleman who was present for the following memoranda :—

Cows.

Young Swinley, (imported,) 11 years old, sold to Mr Gray, of Boston, for $70.

Maggie, (dam Young Swinley,) 6 years old, sold to Mr. Bickett, for the Mass. Ag. Society, for $90.

Pink, (dam Maggie,) 4 years old, sold to Mr. Lawson, of Lowell, Mass., for $75.

Medal, (imported,) 7 years old, sold to Mr. Lawson for $127½.

HEIFERS.

Gowan, 3 years old, sold to Mr. Bickett, for $105.

Nelly, 3 years old, sold to Mr. Sproat, of Taunton, Mass., for $52½.

BULLS.

Jock the Laird, 1 year old, sold to Mr. Rodman, of New Bedford, for $70.

Sandy, 1 year old, sold to Mr. Dean, for $29.

HYBERNATING ANIMALS.

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THE manner in which life is supported in those animals, which remain a long time in a state of dormancy, is, to the first view, at least, quite mysterious. In our region of country, we have the wood-chuck, (or "ground hog,") hedge hog, and some other animals, which pass six or seven months of the year in a senseless sleep. During this long period, they take neither food nor drink, and most of the functions of the body are totally suspended. The black bear also hybernates for a considerable portion of the winter season, but does not fall into as low a degree of torpidity while "denned up," as some other animals.

It is a matter which has often excited inquiry, how life could be supported for so long a time, apparently without sustenance. Observation, however, teaches, that in hybernating animals, a deposit of nourishment is accumulated during their active period, which serves as a source of subsistence during the remainder of the year. The material which affords this supply, is *fat*, and during the period of sleep it is gradually consumed by the process of respiration, or in supporting life. The amount of material consumed is less, however, than would be at first supposed. The reason of this is, that life is only kept up in a very low degree—the very slight action of the system occasioning but little waste, and, of course, calling only for a supply proportionately small.

Dr. HOLMES, of the *Maine Farmer*, in a very sensible and interesting article on this subject, remarks:

"The physiological condition of those animals which become completely torpid during winter, cannot be perfectly ascertained. It has been found, however, that they have a great diminution of bodily temperature—breathe very slowly indeed, so that it is hardly possible to perceive any respiration at all—the pulsation of the heart is hardly felt, and the circulation is of course very languid. The feeling or irritability is almost destroyed, for you can cut off a limb and lay open the body without their appearing to feel it. As we have before stated, they become very lean and emaciated; but notwithstanding all this, when they awake at the end of the torpid period, they are very active and vigorous."

There is one expression (and but one) in the above quotation, to which we take an exception, viz: that animals "*become very lean and emaciated*" at the close of their hybernating period—at any rate, we know that they do not *always* become so. We are aware that the idea advanced by Dr. H. is also countenanced by LIEBIG; but still we are satisfied that it is not altogether correct. We have known bears killed in their "dens," where they had remained for four or five months, which, on being dressed, were found excessively fat; and we have known wood-chucks dug out of their holes in the early part of spring, which were in a surprising state of fatness.

Now we do not by any means assert that these animals, would have been as fat at the close of their torpid state as they were at the commencement, or that the fat is not *lessened* during this state; but we mean to say that so small an amount was consumed, that there was still left a large surplus deposit. Wood-chucks, as before stated, are more torpid in winter than bears, and they therefore require proportionately less to support life; in fact, we have often heard the remark, in our younger days, that these animals "come out *fatter* in the spring than they were in the fall." The remarkable degree of fatness in which they were sometimes found in the spring, undoubtedly led to this mistake; but their condition at this time, is good evidence that only a small amount of fat, comparatively, had been consumed during the winter.

But the condition of animals at the close of hybernation, depends, of course, on the condition they were in when they entered this state, and also the temperature, and other circumstances to which they are exposed. They generally take care to place themselves below the reach of frost, and in a situation where they would be chiefly unaffected by changes of temperature. If the accumulation of fat was large in the fall, it will not all be required to carry the animal through the winter. In regard to bears, it is often remarked by hunters, that those which ramble in winter are poor, and that those which remain in their dens are fat. The reason is obvious—the fat animal is supported from the deposite acquired during the previous season; the poor one is obliged to procure subsistence from fresh supplies of food, or perish of starvation.

But whatever may be the quantity of fat which these animals may have when they first come out of their hiding places in the spring, they quickly lose it. We are convinced of this fact, partly from our own observation, and from the assurances of experienced hunters. They have informed us that the first object of the animal on awaking from its long sleep, is to procure herbage of a cathartic quality; and under the course of depletion which is pursued, the system is rapidly reduced,—the fat is carried off, and the hair becomes loose, and falls off. In a very short time however, the animal appears to have undergone a complete renovation; his old coat is succeeded by a new and brighter one, and with renewed strength he resumes his career of life.

LIEBIG cites a case of a pig, which, having been overwhelmed by a slip of earth, lived 160 days without food; but it was found that during this time it had lost in weight 120 pounds. In reference to this, it should be remembered that the pig was not during his confinement wrapped in a deep sleep; and from the constant uneasiness, which it is natural to suppose his situation produced, there was a much greater consumption of material in supporting life than there is in animals which lie in a torpid state.

This subject has a practical bearing upon which we would say a few words. Although we cannot induce our domestic animals to pass the cold months of winter like the bear and wood-chuck, in an unconscious sleep, yet we can place them in a situation which so far approximates it, that the expense of supporting them may be very much lessened, and their comfort, besides, greatly promoted. It has been proved that warmth and quietude are equivalent to food. In reference to the hog, so much does he resemble the bear in his nature and organization, that if he is well coated and lined with fat at the commencement of winter, he is much inclined to sleep away the time in a comfortable stye; in this situation, so little is the bodily waste, that a trifling amount of food only is required. A knowledge of this important fact, has induced some farmers to adopt a very economical mode of wintering their hogs.

RECENT AMERICAN PATENTS.

Reported for "The Cultivator," by ZENAS C. ROBBINS, *Mechanical Engineer, and Attorney for procuring Patents, Washington, D. C.*

For an improvement in hames for harness. Kasson Frazer, Fayetteville, New-York, Sept. 26, 1846.

The claim in this case clearly sets forth the manner of construction, and the operation of this valuable invention.

Claim.—"What I claim as my invention, and desire to secure by letters patent, is the attaching the curved clipps to the *front* sides of the hames by means of double joints, so as to render them self-adjustable, and to keep the draught directly in a line from the point of attachment of the clipps to the hames, to the point of attachment of the tugs to the whiffletree, in the manner and for the purpose as herein set forth."

CRANBERRIES.

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Abel Burnham, gives in the *Massachusetts Plowman* an accoumt of the manner in which he has cultivated a third of an acre of cranberries. He commenced in April last, on a piece of loamy soil that had been planted to corn the previous year. He took the vines from a swamp, and set them out between the old corn-hills, without plowing or harrowing. In some instances he cut up about six inches square of the turf of the cranberry bed for making each new hill, and in other instances he merely set a few vines; both, he says, did equally well. On the first of June, he went over the hills with a cultivator, making the ground smooth and light. He then hoed the plants, but used no manure at any time. The plants grew finely; about the 20th of July, they blossomed, and have this season produced a very good crop of fruit—some of the hills yielding a pint of berries each. At the date of the communication, (9th Oct.) he states the vines covered the whole ground. He sent a lot of the cranberries to the editor of the *Plowman*, who says they were the "largest and handsomest" he had ever seen. The editor, in making an estimate of the quantity of fruit produced on an acre, says:—

"One pint of berries on each hill, *as far apart as bean hills*, would give 125 bushels per acre."

We would by no means doubt the correctness of the *Plowman's* calculation, but should like to know how *far* "apart" bean hills are?

We see by the reports of the Plymouth County (Mass.) Agricultural Society, that Mr. Abiezer Alger, of West Bridgewater, obtained a premium for a sample of cranberries from a crop of 296 bushels and 17 quarts, from two acres of ground. This crop appears to have been the produce of a bog meadow. Mr. Burnham's experiment is the only one in regard to the cultivation of cranberries on dry land, of which we have learned the results.

NOXIOUS INFLUENCE OF BRICK-YARDS.

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At a late meeting of the New-York Farmers' Club, Dr. Underhill spoke of the influence of the gases of brick-yards, which he said he had for the last six years observed to be very injurious to fruits and vegetables. We take from the Tribune an abstract of Dr. U's remarks on the subject.

"At the time when his attention was first directed to this subject, the following incident occurred to establish his opinion. A friend had observed that, immediately after a severe thunder-shower, all his vineyard appeared in a sickly condition, and no satisfactory reason could be assigned for the occurrence of the phenomenon, until the investigation had proceeded sometime, when Dr. U. discovered that the gases of a brick-yard in the vicinity had been blown over the vineyard, and produced the disastrous effect, turning the leaves to a dark, reddish brown color. These gases were stated by the Doctor to be more particularly injurious in the latter stage of the burning of the kiln, and derive their noxious property from the anthracite coal used, the proportion of which is, in the interior of the kiln, three pecks of hard coal to a thousand brick, and on the outside twelve bushels to the thousand. This he knew to be the case in at least one brick-yard. If there is a light wind blowing, these gases will extend their deleterious influence for miles, the supply being kept up at the yards for hours. They are particularly detrimental to Newtown Pippins, the foliage of which is destroyed for miles. The leaves are turned completely over in many cases, and one side is turned to a different color, a reddish-brown, appearing as if touched by a vehement fire. By these gases trees are often rendered unable to furnish healthy sap for the proper sustenance of the fruit. Speaking of pippins, he mentioned that one of the finest orchards in the country, in the town of Cortlandt, Westchester Co., containing from 1000 to 1500 trees, was entirely ruined, principally by the gases from numbers of brick-yards in the immediate vicinity. This subject was referred to a Committee, to report to the Farmers' Club.

DEMAND FOR AMERICAN PRODUCE.

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Extract from a letter received from Rev. H. Colman, to the Editor of the Cultivator, dated London, 18th September last. In relation to the demand for American bread-stuffs in England, he says,

"There will be a quick demand for all the produce which is likely to come. The best informed and most judicious and sagacious men, are not without alarm for a very serious scarcity of food. The utter failure of the potato crop in Ireland is determined, and the consequences are frightful to contemplate. It is quite general here; but I hope that the alarm with regard to the disease among the turnips in the north, is premature. The crops of oats and barley are not large—wheat is more than an average crop; but there will be no surplus, and there is anticipated a very large demand for bread-stuffs upon the continent.

"My 8th No. will, I suppose, soon be through the press, as the publishers have all the matter. In this I have treated fully, the subject of live stock. I have desired to avoid any improper partiality, and to place the subject in as fair and proper a light as possible. I shall leave now in a few days for the continent, and hope not to be unreasonably long before I send the 9th No."

INQUIRIES.

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Corn for Fodder.—J. H., (Guelph, C. W.) We prefer sowing or planting corn in drills, for fodder—the drills 2½ feet apart, and two bushels seed to the acre. The best kind of corn we have ever tried for this purpose is the "Chinese tree corn;" next to this the large sweet corn. When it is cut, it should lie on the ground as thin as possible, for a few days, in dry weather, and then may be bound in small bundles near the top and set in small shocks, where they should remain till thoroughly cured. It should be cut when the top of the tassel begins to turn. Both the stalks and leaves are good food, if well managed, but the leaves are best. It is best to cut it with a machine before it is fed out.

Centre-Draft Plow.—A Subscriber, (Easton, N. Y.,) Prouty and Mears' centre-draft plow is designed for *sod*. Its "practical operation" is approved. The usual weight of No. 23, (for level furrows,) is 95 lbs., with wheel and cutter—that of the 5½, or self-sharpening, (for angular furrows,) is 120 lbs. They are "sufficiently solid in construction to be serviceable on rough, stony or rocky land." The cost here is $10½ for the 23, and $13 for the 5½, with one extra point for each. The price of the points or shares, is 50 cts. each. We are unacquainted with the "Corliss" plow.

Waste from Lime-Kilns—A Subscriber. We should think the "mixture of lime, ashes and coal" you speak of, would be of use as manure, but a trial would best show to what crops and soils it is best adapted.

Stacks and Hay Barns. A Subscriber. We should prefer putting hay into stacks well made and *thatched*, to using what are called "Dutch barns," or caps. The stacks, when well made, expose less surface to the weather, and they can always be erected on the spot where they are most wanted; but the caps are not so readily moved.

Cheviot sheep.—Z. B. W., (Little-Falls.) We think that the mutton of the Cheviot sheep sells as high in the British markets as that of the South-Down. The wool answers for combing, and we think the fleeces average something more in weight than the South-Downs.

Dorking Fowls.—J. H. C., (New-Albany, Ind.) We do not know any breeders of Dorkings near Louisville or Cincinnati. We would refer you to Mr. *Bateham*, of the (Columbus) Ohio Cultivator. The fowls could be had here, if desired,

Soot, when applied to the roots of the common primrose and cowslip, has the effect of transmuting their complexion from their wonted pale yellow color to that of a delicate pink.

WILMINGTON (DEL.) CATTLE-SHOW.

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THE annual exhibition of the Newcastle County Agricultural Society, was held on the farm of Col. Andrews, near Wilmington, and in rear of his elegant mansion. The weather was most propitious, and the concourse of spectators immense, beyond precedent; it being computed that more than 4000 persons were on the ground. A great portion of these were ladies accompanied by their husbands and families in their carriages,—a goodly show, and evincing a growing preference for this, the most exciting of all our rural enjoyments.

The show of stock was not numerous, but the plowing match eclipsed all that had gone before it, and was most nobly contested by twenty plows, divided into two classes; the first for men, the second for lads under 14 years of age. The ground chosen was uneven, with a growth of first and second crop of clover, and weeds three feet in height, and strong in proportion—a new feature in plowing for premium—through which the plows had to find their way, without first harrowing down or being mown, as is customary; and well did they perform the task, going across the old furrows in search of obstacles to contend with, and overcoming them with ease.

The result speaks volumes in favor of the Prouty & Mears', or Centre-Draught Plows, which under such trying circumstances, were found to pursue "the even tenor of their way," through the thickest of them, without the intervention of the plowman, furrow after furrow, at the preparatory trial, before starting for premiums, and performing such work as is indeed but little inferior to "spade labor." At the conclusion of the match, the following premiums were awarded to the Centre-Draught ploughs of Prouty & Mears, viz: The first, second, and fourth premiums in the 1st class, and the first, second, and third premiums in the 2d class—six premiums out of eight, the number offered.

The winner of the first premium in the second class, was the son of Mr. Bryan Jackson, aged eleven years, who, the last year, at the age of ten, took the second premium at Wilmington, and a gratuitous premium of $3 at the Philadelphia Ag. Society's plowing match, and it is his intention again to contend for the men's prize, the coming season, at the same place. Success attend such "sons of the plow!" The emulation thus fostered and encouraged, will "grow with their growth, and strengthen with their strength," and train to the service a race of plowmen that shall be able to cope with those of whom Colman speaks, "whose furrows lie like the plaits of a shirt-bosom"—as did those at the recent match of the Newcastle County Society, under most untoward circumstances; showing most conclusively, that with the Prouty plows with wheels, it is no longer necessary to assign such labor to the best hand upon a farm, lads of a dozen years of age being quite competent to the task. B.

Wilmington, Del., 19th Sept., 1846.

TO THE OFFICERS OF AGRICULTURAL SOCIETIES.

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THE writer considers it desirable that there should be more of an interchange of views and prospects of the different Agricultural Societies, and especially he desires it between the county ones of New-York. In this way very many important improvements in the management of such bodies may be enjoyed by all.

It is proposed that upon the election of officers for each society, the name of the person who does the business of the society—either President or Secretary—with his post-office address, be sent to the Cultivator, (post age paid,) for publication.

That the Secretary of each Society shall keep a record of the names thus published, and upon the publication of the annual premium list, addresses, or any proceeding of the Society, enough be furnished to supply each of the other county societies with a copy. Some of the premium lists are very badly arranged, and are made out without much care. Let us look over the transactions of each other, and copy the good. C.

THE CULTIVATOR.

ALBANY, NOVEMBER, 1846

TO CORRESPONDENTS.

COMMUNICATIONS have been received, the past month, from James R. Verdier, B. C., Clark Rich, N. Longworth, E. D. Andrews, L. A. Morrell, A Subscriber, Z. C. Robbins, G. P. Lewis, T. H. Collins, D. C. C. Wright, X. Y. Z., Rusticus, J. Davis, R. H. Levering, Charles, S. W. G.

BOOKS, PAMPHLETS, &c., have been received as follows:—

Descriptive Catalogue of Fruits and Ornamental Trees, &c., cultivated and for sale at the Mount Hope Nurseries of ELWANGER & BARRY, Rochester.

Advertisement of the Seneca Lake Highland Nursery of E. C. FROST, Catharine, Chemung Co., N. Y.

The New-England Ag. Almanac for 1847. F. TROWBRIDGE, publisher, New-Haven, Conn.

Also a great number of newspapers containing Ag. Prize Lists and accounts of annual exhibitions of Ag. Societies.

A Brief Compendium of American Agriculture. By R. L. ALLEN, Esq., of Buffalo. New-York, Saxton & Miles—438 pp., 12 mo.

MONTHLY NOTICES.

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GUANO.—A correspondent at Mamaroneck, Westchester county, N. Y., whose signature is wholly illegible, writes that he used guano the past season on wheat, rye, oats, barley, potatoes, Indian corn, ruta-baga, common turnep and sugar beet, on all of which he states that it operated well, except corn and rye. He also used guano on his meadows. He used 200 lbs. guano and 300 lbs. gypsum per acre, and it increased the quantity of hay from 1800 lbs. per acre, (where there was no guano or gypsum,) to 4160. Recommends 300 lbs. guano and 300 lbs. gypsum as a top-dressing for meadows, to be applied immediately previous to a rain, just as the frost leaves the ground. For oats and barley, he considers 224 lbs. per acre a good dressing.

STOCK AT AUCTION.—Wm. CUSHMAN, of New-Braintree, Mass., offers at auction on the 10th inst., Durham cattle, South-Down sheep, and Mackay pigs.

CHEVIOT SHEEP AND AYRSHIRE COWS.—We see by a communication in the October No. of the *Farmers' Library*, that Hon. DANIEL WEBSTER has, on his farm at Marshfield, Mass., a flock of twenty Cheviot sheep, lately imported from Scotland. We understand that Mr. W. has also lately imported some fine Ayrshire cows which have been added to the superior herd before kept on his farm.

MORGAN HORSES.—We are informed that Messrs. GEO. A. MASON, of Jordan, and —— Munro, of Camillus, purchased the fine Morgan horse "General Gifford," at the late State Fair at Auburn. We have no doubt that he will prove highly useful in breeding to the good-sized strong mares of that section. We publish in this number the report of the committee on "Foreign Stock" exhibited at the Fair, and we would call attention to the remarks therein relative to this horse and the "Gifford Morgan" which was exhibited with him.

FRUITS.—Since our last, we have received from APOLLOS ROLLO, of Stephentown, specimens of the "Gloria Mundi" apple, weighing 17 ounces each; from Professor HALL, of this city, specimens of a greenish-red, striped apple, known in the eastern part of Massachusetts as Seeknofurther. The samples sent were from Hingham, Mass. We do not find this apple described in Downing's "Fruit and Fruit trees," or any work at hand. It is well known in the section named, and is an excellent apple from the middle of September to the middle of October. From E. D.rr, specimens of a seedling clingstone peach of superior excellence, and very fine samples of Catawba grapes. From S. D. **Smith**, Lansingburgh, specimens of beautiful quinces, from trees reared from seed planted eight years ago. Four of them weighed three pounds and a quarter. From **Geo. Desbarats**, Montreal, (through Mr. **Thorburn**, of this city,) specimens of the following varieties of apples: St. Lawrence, Fameuse, Ribston Pippin, Golden Pippin, Pomme Grise, Cardevella, Montreal, Beauty.

From E. P. **Prentice** specimens of the Gloria Mundi, (one of which weighed 20¼ ounces, and was 14¼ inches in circumference,) Greening, Black Gilliflower, Newtown Pippin, English Pearmain, Talman Sweeting, and three other very fine kinds, the names of which are unknown. From R. H. **Pease** a specimen of a winter russet sweeting.

Large Apple Tree.—During a recent visit to New-York, we visited the garden of Thomas Pringle, Esq., corner of sixth avenue and eleventh-street, at the invitation of a friend, to examine an ancient apple tree, which we found to measure ten feet, six inches in circumference at the ground. The land on which it stands, was purchased by the late Samuel Milligan in 1799. The tree has not, it was said, increased in size since that time. It is a Pearmain, and still bears more or less fruit annually.

☞ Mr. J. N. **Blakeslee**, wishes to correct a mistake which occurred in the extracts we published from his communication, in our August number. It is there said—"I never sell any of my best ewes till they are advanced in years." Mr. B. states that the article (or a portion of it,) was written several months before its publication, but that before it appeared in print, he *had* sold a few of his best ewes.

Mr. **Reybold's Sheep.**—A writer in the *Greenville (S. C.) Mountaineer*, requests to be informed how long the fleeces of Mr. **Reybold's** Oxfordshire Sheep, spoken of in our July number, had been growing. He thinks, "justice requires that when the yield of wool is reported, the *time* in which it was grown should also be stated." The statement we published, gives the date of the shearing of this year, 20th May, but the time they were sheared last year, is not mentioned.

Donations to the State Agricul. Society.—We are gratified to learn that **James Lenox**, Esq., of New-York, has presented the State Ag. Society with thirty copies of Washington's Letters on Agriculture. They will be paid out as premiums by the Society. **Joseph Fellows**, Esq., of Geneva, who in 1843 presented the Society with $100, has lately made a donation of $50 more. Such liberal efforts to advance the interests of agriculture, cannot fail to be appreciated by the Society as well as by the community in general.

Crops in Maine.—The *Maine Farmer* says,—"It has been an excellent season. Grass has been excellent, and our barns are full of hay. Wheat has been more than a medium crop. Oats are very good. Indian corn was never better. Potatoes, as a general thing, are of good quality, though hardly an average crop, as it regards quantity—not so many planted as usual. Grafted winter apples below an average crop. Natural fruit is abundant."

Saxon Wool.—We have received from **Charles Watkins**, of Walpole, N. H., some samples of very fine and beautiful wool, from his flock of Saxon sheep. f these samples, which appear to have been taken from some fifty or sixty sheep, are a fair criterion of the quality of the whole flock, it must be valuable. We are not informed of the number of the flock.

Correction.—In the list of premiums published last onth, it was stated that the first premium for *horse powers* was awarded to **Richard Montgomery**, of *Onondaga*—it should have been *Waterville, Oneida county*. Mr. **Montgomery** thinks that the editorial remarks in our last, in relation to **Fitzgerald's** Portable Mill and **Horse-Power** did "injustice" to *his* mill, "indirectly." He says,—"the truth is, Fitzgerald's Horse-Power made the attempt, with two horses, to operate his mill, and failed. It was then moved to my Horse-Power and successfully operated by it with *one* of the same span of horses which were insufficient to move the mill with Fitzgerald's power."

Merino Wool.—We have some samples of very handsome Merino wool from D. and L. **Eastman**, of East Rupert, Vt. They are free from gum, white, soft and fine.

Crops on Long Island.—The following is an extract from a letter dated Queens County, Sept. 19th, 1846, which came too late for notice in our last number.

"Our farmers are now busy cutting up the corn, which will be very good. Buckwheat will not be a heavy crop. Potatoes rotted much, and the crop will be light. The weather has been so very fine, that we have pasture in abundance, and want cattle and sheep to feed. The distemper with horses yet continues on the island, but is making towards the east end. I have heard of it as far east as Smithtown, where it was very fatal. It has been most fatal upon the south side of the island; in some villages a horse or two dying upon each farm. Perhaps 1000 horses have died with it upon Long Island. It is generally far less fatal now, than early in the season."

Potatoes injured by Wire-Worms.—Mr. J. R **Starr**, of Verona, N. Y., informs us that his potatoes the past season were greatly injured by the fibres which connect the tubes with the stalk, having been eaten off by wire-worms. The effect of this was to cause the tops to wilt and die, presenting an appearance similar to those affected with the blight, or what is generally known as the "potatoe disease."

Merinos for Mississippi.—We understand that the Messrs. **Law**, of Meredith, Delaware county, N. Y., have lately disposed of a lot of superior Merino sheep to Mr. **Brown**, of Mississippi. The sheep have been forwarded, through an agent in New-York, to New-Orleans.

Effects of strong alkalies.—A correspondent mentions that he put the ashes from a leaching tub into his hog-pen, and his pigs, from working among them, were all taken lame, and some of them lost their hoofs. Just as might have been expected. The ashes should have been very thinly spread over the yard.

Potatoe Rot.—A correspondent of Orange County, with the signature of **Charles**, writes us that according to his experience, the best way to escape the potatoe disease, is to plant very early. He states that last spring he planted one corner of a lot about a fortnight earlier than the rest of the field. "They were," he says, "well tended, and while the vines were green I mowed off the tops of half of the first planted and half of the last. On digging them, I found mowing the tops did no good whatever, no difference being perceptible between those which were mowed and those which were not. Of those which were planted first, (about the 19th May,) three-fourths were rotten; those planted last, had not a sound one among them. Again, of those potatoes which were planted in a field about the 27th April, I should judge, from the few which have been dug, that comparatively few will be rotten, although the yield will be quite light. I think potatoes which do not rot, do not yield as well as they did a few years ago."

Attachment of a Cow for Pigs.—Mr. S. **Leech**, of Wilbraham, Mass., relates a singular case of the attachment of a cow for pigs. In relation to this cow, Mr. L. writes—"a few years ago she slunk her calf, and as I had a pig running in the barn-yard, she took to the little porker and was very partial to him—not permitting dogs, or other animals to molest him. I killed the pig in the winter, and as the cow had another calf in the spring, I was in hopes she would never notice a pig so again; but after I sold her calf, and got another pig, she took to him, and even taught him to suck her! I had the good fortune to break up that. I got me another cow, and she was not so fond of the pig, but would let him feel her horns. This last spring, as I did not get a pig till sometime after I had sold the last calf from the cow first mentioned, I was in hopes she had forgotten all about the pig, but she still manifests a strong regard for him, and lows for him when she comes from her pasture as she would do for her calf."

Profits of Bees.—R. R. Child, Pittsfield, Vt., thinks keeping bees very profitable. He says every farmer may, by the investment of a few dollars, supply his family abundantly with honey, provided the bees are properly managed. He says one of his neighbors, Mr. A. Colton, has realized more profit for the last four or five years, in the produce of honey than any other man in Pittsfield with "five times the amount of money invested in any other way." He says Mr. Colton has an improved hive, but he does not give us such a description of it as enables us to form an opinion of its merits.

NEW PUBLICATIONS.

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A Brief Compend of Practical Agriculture; by R. L. Allen, Buffalo: Saxton & Miles, New-York, publishers.

This work, containing 437 pages, 12mo., is as it purports to be, a brief compendium of agriculture; but from considerable examination, we think it in general very judiciously written. No attempt is made to create astonishment by the announcement of *new* discoveries, but the most essential *known* facts in relation to the different branches of husbandry, are presented in a clear and perspicuous style. Mr. Allen has been known for several years, as one of our best and most practical agricultural writers, and we presume his reputation in this respect will be fully supported by this work.

The Trees of America: Native and Foreign, Pictorially and Botanically delineated, and Scientifically and Popularly Described: Being considered principally with reference to the Geography and History, soil and situation, propagation and culture, accidents and diseases, etc. Illustrated by numerous engravings. By D. J. Browne, author of 'Sylva Americana.' New-York: Harper and Brothers.

This is a most comprehensive title, truly, and had the author acted up to the full letter of it, he would have found some difficulty in compressing the matter he would have been obliged to write, into *thrice* 520 pages, the number which his volume contains. It has grown to be the fashion to give a high-sounding title to any work which describes in a general manner, the products of the United States, merely; as if *America* were the United States, or the only part of the continent worthy of the name. We are, notwithstanding, a plain people, and we like to have the names of either books or things, express what they really are. The title of this work, would lead us to suppose that in it we have a history and description of all the species and varieties of trees that grow on this continent, in its length and breadth—from the shores of the Atlantic to the Pacific—from the Arctic ocean to Patagonia. But such is not the fact—it does not even describe many of the principle trees of the United States. Those important trees, oaks and pines, are entirely omitted, as are also willows. This is a discrepancy, compared with the title, which ought not to have occurred.

In the arrangement of the work, Mr. Browne has closely followed Loudon, to whose works he says he is deeply indebted—as indeed who is not, that writes on the subject of trees? The descriptions of species are generally plain and comprehensive. The names and descriptions of the principal varieties are introduced; following which are its geography, history, the description of the soil and situation most suitable for its successful growth, and how to propagate and manage it. Following this, are given accounts of the casualties, insects and diseases, to which the tree is subject. All this is interspersed with many a legend, anecdote and story, illustrated with apt quotations. This has greatly *popularized* the work, making what most people have been in the habit of considering a dry and scientific study, highly interesting.

The illustrations are in some respects objectionable. The portraits of the trees are entirely too small, generally, to convey a characteristic idea of the species or variety intended to be represented, and, what is a still greater objection, the *same cut* is sometimes used to represent several trees of not only different species, but distinct genera—thus confounding their opposite characteristics. The cuts of the leaves are generally well executed, but we are sorry to notice that some of the cuts designed to show sections of fruits, convey no proper idea of the fruits to whose names they are attached. Of this description, is the cut of the pear, on page 287 and the cut of the apple on page 296. The blossoms, also, in some instances, are not so correctly delineated, as to be readily recognized. This may be said in reference to the cherry, the pear and some others.

There is, however, a large amount of useful information in the book, and we have do doubt that it will prove valuable to a considerable portion of the community. *

FOREIGN.

••••••

By the Caledonia, arrived at Boston on the 20th ult., we have our foreign exchanges to the first of October. The failure of the potato crop is ascertained to be less than was a short time since anticipated. The wheat crop of England is said to approach nearly to an average crop, and oats and barley are more than an average. The stock of *old* wheat at present, is greater than it has been since 1837. Hay is abundant, and the turnep crop is good. The prospect is, that there will be no necessity of using potatoes for stock, and that by economy in use, they may serve the people for three-fourths of the usual period, that potatoes are used. There is, however, no doubt that a considerable supply of breadstuffs will be required in the kingdom; at the same time, we think there is good sense in the caution given in some of the English papers, against running into wild speculations, as food will be sent to the British ports from every corner of the world where it can be spared. The effect of the news has been to raise the price of flour and grain in the American markets, but to what extent, cannot, up to the date of this writing, be fully ascertained. There was a demand in England for American butter and cheese—beef was dull—pork higher than at the same time last year, but American is in bad repute on account of the packing.

PRICES OF AGRICULTURAL PRODUCTS.

••••••

New-York, Oct. 23, 1846.

COTTON—New Orleans and Alabama per lb., 6¾a11½c.—Florida, 8½a10¾—Upland, 6¾a10½ cts.

BUTTER—Orange County, per lb., 16a18c.—Western dairy, 13a15c.

CHEESE—Per lb., 7a7¾c.

FLOUR—Per bbl., $6.12½a$6.25—Richmond City Mills, $6.68¾ a$7.

GRAIN—Wheat, per bushel, $1.25a$1.33—Rye, 78a80 c.—Corn, 80c.—Oats, 35a37c.

HEMP—Russia, clean, per ton, $210.

HAMS—Smoked, per lb., 6½a9 cts.

BEEF—Mess, per bbl., $7a$8—Prime, $6.a$6.62½.

LARD—Per lb. 7½a8c.

PORK—Mess, per bbl., $9.12½a$10.18¾.

WOOL—(Boston prices.) Oct. 18:

Prime or Saxon fleeces, washed per lb.	38a40 cts.
American full blood fleeces,	33a35 "
" three-fourths blood fleeces,	25a28 "
" half blood do	23a25 "
" one-fourth blood and common,	20a22 "

AMERICAN HERD BOOK.

CONTAINING pedigrees of Short Horn cattle, to which is prefixed a concise history of English and American Short-Horns, compiled from the best autherities; by Lewis F. Allen. This valuable book contains the pedigrees of about six hundred cattle, and it should be in the hands of every breeder of Short-Horns. A few copies for sale at the Office of the Cultivator.

Oct. 1—3t.

DOWNING'S WORKS.

VALUABLE WORKS, by A. J. Downing, Esq. *The Fruits and Fruit Trees of America*, or the Culture, Propagation, and management of the Gardens and Orchards of Fruit Trees generally; with descriptions of all the finest varieties of fruit cultivated in the country.

1 thick vol. 12 mo., with many engravings. $1.50. Or a superior edition in large 8 vo., to match the author's other works. $2.50.

"This is the most valuable of all the books which Mr. Downing has contributed to the higher departments of our rural literature, and it is the most charming book of the season. Some idea may be formed of its completeness from the fact of its containing a list of no less than 490 sorts of apples. Mr. Downing claims the right to talk about fruits and trees from having been born in 'one of the largest gardens, and upon the banks of one of the noblest rivers in America;' everybody will concede the right since he has shown himself so competent to the task."—*Broadway Journal.*

"This is a valuable practical work, and every orchardist and every fruit-grower should possess himself of its stores of information."—*U. S. Gazette.*

A Treatise on Landscape Gardening; adapted to North America, with a view to the improvement of country residences. Comprising historical notices, and general principles of the art; directions for laying out grounds, and arranging plantations; descriptions and cultivation of hardy trees; decorative accompaniments to the house and grounds; formation of pieces of artificial water, flower gardens, etc.; with remarks on Rural Architecture. New edition, with large additions and improvements, and many new and beautiful illustrations. 1 large vol. 8vo. $3 50.

"This volume, the first American treatise on this subject, will at once take the rank of THE standard work."—*Silliman's Jour.*

"Downing's Landscape Gardening is a masterly work of its kind,—more especially considering that the art is yet in its infancy in America."—*Loudon's Gardener's Magazine.*

Designs for Cottage Residences; adapted to North America, including Elevations and Plans of the Buildings, and designs for laying out Grounds. 1 vol. 8vo., with very neat illustrations. Second edition, revised. $2.00.

A second edition of the "Cottage Residences" is just published, as Part I.; and it is announced by the author that Part II., which is in preparation, will contain hints and designs for the interiors and furniture of cottages, as well as additional designs for farm buildings.

Gardening for Ladies; and Companion to the Flower Garden. Being an alphabetical arrangement of all the ornamental plants usually grown in gardens and shrubberies; with full directions for their culture. By Mrs. Loudon. First American, from the second London edition. Revised and edited by A. J Downing. 1 thick vol. 12 mo., with engravings representing the processes of grafting, budding, layering, &c., &c. $1.25.

"A truly charming work, written with simplicity and clearness. It is decidedly the best work on the subject, and we strongly recommend it it to all our fair countrywomen, as a work they ought not to be without."—*N. Y. Courier.*

"This is a full and complete manual of instruction upon the subject of which it treats. Being intended for those who have little or no previous knowledge of gardening, it presents in a precise and detailed manner, all that is necessary to be known upon it, and cannot fail to awaken a more general taste for these healthful and pleasant pursuits among the ladies of our country.—*N. Y. Tribune.*

Published and for sale by **WILEY & PUTNAM,**
Oct. 18.—3t No. 161 Broadway, N. Y.

Messrs. W. & P. will publish shortly, *Wightwick's Hints to Young Architects.* Edited with additions, by A. J. Downing.

Also, a new edition of Lindley's Horticulture, edited by A. J. Downing, and Prof. A. Gray.

NOTICE.

THE undersigned expects to return from his journeyings in the southern states about the 1st February next, when he hopes to be fully prepared to meet and fill all orders in his line, particularly for his "Warren Horse Powers and Threshers," now so much and perfectly improved, his "Hand Threshers," and the "Trimble Horse Powers," and the Endless Chain Horse Powers—also for the "Platt's Improved Portable Burr Stone Mills,"—together with Ploughs, Castings, Corn-Shellers, &c., &c.

JAS. PLANT, 5 Burling slip, N. Y. City.
Nov. 1—2t.

FARM WANTED.

A GENTLEMAN is desirous of purchasing a farm, capable of being occupied strictly as a STOCK FARM, sufficiently near some railroad communicating with the Erie Railroad to facilitate the transportation of stock to market. It is wished that the farm should be situated in a healthful district, with pleasing scenery, and in the immediate vicinity of water, and having a house capable of accommodating a gentleman's family. The soil, and all the appurtenances of the farm, should be such as would ield the owner a good return for his investment. Applications, *paid*) may be addressed to Box 2031, NEW-YORK POST-OFFICE
Oct. 1—3t.

FOR SALE.

A FEW South Down Rams and Ewes; also Cotswold Rams and Ewes—for sale by the subscriber.

JNO. McD. McINTYRE.
[illegible]

AGRICULTURAL WAREHOUSE.

183 *Front-st., New-York.*

THE subscriber offers for sale an extensive assortment of Farming and Gardening utensils, consisting in part of plows of Freeborn's, Minor's, Horten & Co.'s, Prouty & Mears', and Ruggles, Nourse & Mason's patterns. The Locked Coulter, and Wrought Share Plow.

Corn Shellers, Fanning Mills, Grain Cradles. Corn and Cob Mills, Straw Cutters, of Greene's, Hovey's, Eastman's, and other most approved patterns.

Horse Powers, Threshing Machines, &c. Gin gear, Mill, Horse-power, and all other castings, constantly on hand. Also a general assortment of Brass, Copper, and Iron Wire Cloth, for Paper, Rice, and other mills. Seives, Screens, Riddles, &c., &c.

Persons ordering articles from the subscriber may depend upon having them made of the best materials and in the most workmanlike manner.

JOHN MOORE.
New-York, Oct. 1, 1846—1t*

KENDALL'S CYLINDER CHURNS.

THE following in relation to the above churns, from a firm in Vermont, who purchase of us, will show in what estimation the cylinder churns are held.

"We wrote you a few days since, to forward three each of the two smallest size churns. Please send us immediately six each of three sizes. Churns are getting in good demand. Our people think there is quite a saving when they can fetch the butter in two minutes, instead of churning two hours with the old fashioned churn. The Kendall churn is getting to be all the go."

The above churns are always for sale at wholesale or retail, at the Albany Agricultural Warehouse, No. 10 Maiden Lane, and 23 Dean-st. **LUTHER TUCKER.**

WIRE CLOTH SEIVE AND SCREEN MANUFACTORY.

THE subscriber has constantly on hand a large assortment of the above articles, which he offers at the lowest market prices. **D. L. CLAWSON.**
July, 1846—10 mos. 101 Water-st , New-York
P. S.—All kinds of wire work manufactured to order.

FOR SALE.

A FEW fine Paular Merino sheep for sale, bucks and ewes; say about 50 ewes from four to six years old, and 40 to 50 buck lambs, that are nice, and of a large size, and 6 or 8 bucks that are from one to four years old, all in fine order.

JOSEPH I. BAILEY.
Newport, Sept. 1. 1846.—3t.

COMMERCIAL GARDEN AND NURSERY, OF PARSONS & Co., FLUSHING, NEAR N, Y.

THE proprietors of this establishment are constantly increasing their stock which now covers nearly seventy acres of ground, and includes every desirable variety of Fruit and Ornamental trees, Shrubs, Roses, Vines, &c Their possession of specimen grounds for the testing of every variety of fruit they cultivate, affords them increased facilities for the attainment of correctness. They would also call attention to their large assortment of Foreign Grapes, some seventy varieties of which they are fruiting under glass.

To venders and those who purchase in large quantities, liberal discounts will be made Catalogues can be obtained gratis of Parsons & Lawrence, 10 Pine st; of A. B. Allen, 187 Water st., or of the proprietors by mail.

Sept 1.—3t. [1]

FINE WOOLED BUCKS.

THE subscriber has had left in his charge, several bucks which are a cross between the Saxon and Merino varieties. They are two years old, of good size and form, and their wool, both in quantity and quality, would be found satisfactory. Further information given on inquiry. **SANFORD HOWARD.**
Cultivator Office, Albany, Sept. 1, 1846.

GUANO.—200 tons, the balance of the ship Shakspeare's cargo from Ichaboe, in tight casks, for sale in lots to suit purchasers, by **E. K. COLLINS & Co., 56 South-st.**

The many experiments made this season from this cargo, not only prove the great gain in using it, but that it is at least equal if not superior to any other guano.

Sept, 1, 1846.—tf

FRUIT TREES.

THE subscribers would respectfully call the attention of the public to their assortment of FRUIT TREES. They are enabled this fall to offer a choice collection of many of the most esteemed varieties of Apples, Pears, Cherries, Peaches, Plums, &c., &c., &c. The assortment of trees having been considerably increased, persons desirous of obtaining articles in the nursery line, will find it worth while to examine the collection previous to purchasing elsewhere. All of which will be offered at very reasonable prices for cash.

N. B. All articles intended for distant transportation will be carefully packed at the expense of the purchaser, and delivered free of cartage to any part of the city.

WILSON, THORBURN & TELLER.

☞ Orders sent to Wm. Thorburn, Seedsman and Florist, [illegible] Broadway, Albany, will receive prompt attention.
[illegible]

DOWNING'S NEW WORK.

THE HORTICULTURIST,

AND

JOURNAL OF RURAL ART AND RURAL TASTE.

THIS work, the publication of which was commenced on the first of July, 1846, may be ordered of the Proprietor, LUTHER TUCKER, Cultivator Office, *Albany*, N. Y., or of JOSEPH BRECK & Co., Agricultural Warehouse, 51 North Market-street, *Boston*; M. H. NEWMAN & Co., Booksellers, 199 Broadway, *New-York*; and G. B. ZIEBER & Co. *Philadelphia*, by whom it is published in those cities.

☞ Agents can obtain the work of either of the above publishers, at 20 per cent. discount, where five or more copies are ordered.

THE HORTICULTURIST is edited by A. J. DOWNING, Esq., and published on the first of every month, each number containing 48 pages octavo, printed in the best style, and embellished with plates and numerous other engravings, in a style similar to those given in Mr. Downing's "Landscape Gardening," and "Cottage Residences." Price $3 per annum, payable in advance.

THE HORTICULTURIST is devoted,

1. *To* GARDENING *in a thoroughly practical as well as scientific sense.*
2. *To the* DESCRIPTION *and* CULTIVATION *of Fruit Trees.*
3. *To Gardening as an* ART OF TASTE, *embracing essays, hints and designs on Ornamental and Landscape Gardening.*
4. *To* RURAL ARCHITECTURE, *including Designs for Rural Cottages and Villas, Farm Houses, Gates, Lodges, Hot Houses, Vineries, &c., &c.*

In short, this periodical may be considered a continuation of the various works on Rural Subjects, by its Editor, which have already been so favorably received by the public. It is now his object to assist, as far as possible, in giving additional impulse to the progress of Horticulture and the tasteful in Rural Life; subjects which are now so largely occupying all those interested in country pursuits.

☞ Subscriptions received by the publishers, as named above, and by the Agents for "THE CULTIVATOR," throughout the Union

NEW-ENGLAND AGRICULTURAL WAREHOUSE AND SEED STORE.

Nos. 51 *and* 52 *North Market-Street, Boston.*

FOR sale at this establishment, a general assortment of Agricultural and Garden Implements—Howard's Improved Patent Cast Iron Plows of all sizes. Martin's improved Eagle and other Plows; Double Mould Board, Side-Hill, Paring, and other plows, in great variety, and of the most approved patterns. Howard's Subsoil Plows, Cultivators of different descriptions; Willis' Seed Sower, (the best in use;) Geddes' and other Harrows of various patterns; Green's Straw-Cutters, Willis' Straw-Cutters, of various kinds and prices ;Gault's Patent Churns, Grindstones or Friction Rollers; Cast Iron Field Rollers, (a very superior and substantial article ;) Garden Rollers of cast-iron, different sizes; Iron Rakes of every size and variety; Garden Trowels, Syringes, in great variety; Pruning and Budding Knives; Pruning Scissors and Shears in great variety; Grass Hooks and Garden Shears; Garden and Field Hoes of every pattern; Scufflers every size; Pick Axes, Shovels, Spades, Dung and Garden Forks of every description; Hay Tools, including the very best Scythes manufactured in the country, (in all cases warranted;) Hall's and other Hay Rakes, Pitch-forks, Grain Cradles, Horse Rakes, Sickles, Austin's Rifles. Whet Stones, &c., &c.

Also a complete assortment of Chains, viz:—Fence Chains—Trace do —Ox do.—Dog do.—Tie-up do. Hale's Horse Power; Hale's Threshing Machine and Winnowing Mills, Garden Engines, &c.

Also Axes, Hatchets, Bill Hooks, Hammers; Axe, Hoe, and Rake Handles; Ox Yokes, Bull Rings; together with every other article important for Agricultural or Horticultural purposes.

Harris' Paint Mill, the best in use, is also for sale at this establishment.

SEEDS, TREES, AND PLANTS.

The subscribers are enabled to furnish seeds of the purest quality, of every variety of field, vegetable, and flower seed; embracing every variety desirable far cultivation.

Also, Fruit, Forest, and Ornamental Trees and Shrubs, of every description.

Also Hardy Herbaceous Plants; Roses, embracing 500 of the best varieties; Bulbous Roots in great variety. Green-House Plants, Grape Vines, &c.

☞ Orders promptly attended to. JOSEPH BRECK & Co.

Boston, Sept. 1—tf.

TO WOOL-GROWERS.

THE subscribers have a tract of land lying in Patrick Co., Va., consisting of about *ten thousand acres*, which they wish to sell or rent. It has on it immense quantities of the largest timber, with abundance of water, and water power. A portion of the land has been cleared, and produces the finest grass in the world. We would like to dispose of it, or to enter into partnership with any gentleman who would furnish a flock of sheep, and go into the business of growing wool. Apply by letter to either of the subscribers, at Cumberland Court House, Va., or in person to Col. A. Staples, Patrick Co., Va., who will show the land.

WILLIAM W. WILSON
WILLIS WILSON.

Sept. 1—6t.

NURSERY OF J. J. THOMAS,

Macedon, Wayne Co., N. Y.

A FINE collection of fruit trees are offered for sale at this nursery, *all* of which have been propagated from *bearing trees*, whose genuineness or excellence, and fitness for the climate, have been thoroughly proved by the personal examination of the proprietor. It has been a principal object to avoid the confusion resulting from a numerous list of varieties, and to present only a moderate collection of the very finest kinds. To accomplish this, many years have been occupied, and selections have been made from several hundred sorts in bearing, none but the finest being chosen, after thorough examination and trial.

The Ornamental Department comprises a very select list of hardy shrubs and herbaceous perennial plants.

The new Catalogue of this nursery will be forwarded gratis by mail, on every post-paid application.

Oct. 1—2t

ISABELLA GRAPES,

OF proper age forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success (provided their location is not too far north.) All communications, post-paid, addressed to R. T. UNDERHILL, M. D, 400 Broadway, New-York, will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the northern, and all the western, middle and southern states. The fall is found to be as good a time for planting vineyards as the spring, if not deferred too late in the season.

New-York, Oct 1, 1846—2t.

A GOOD FARM IN AUBURN FOR SALE.

THE subscriber offers for sale the farm on which he now resides, in the village of Auburn, Cayuga county, consisting of 152 acres of good grain aud grazing land, well enclosed and watered, and upon which are one large, and three moderate sized DWELLING HOUSES, Carriage Houses, Barns, Sheds, and other necessary out-buildings, three Apple Orchards, a great variety of choice Fruit Trees and Shrubbery, four durable Springs, three wells, two hundred rods of full stone fence, and an inexhaustible QUARRY of a superior quality of grey and blue lime stone, suitable for cutting and dressing, eligible and convenient for a continned sale of that article, either rough or hewn, according to the demand, and from which most of the elegant stone buildings in Auburn were erected.

This farm extends from North-street to and across State-street, with a front of eighty-six rods on the former and one hundred and sixteen rods on both sides of the latter—upon either of which may be advantageously sold a great number of village lots, at the pleasure of the owner. About 22 acres, including the large house, barns, sheds, two orchards and garden, lie between North-stree and the Auburn and Syracuse Railroad; 65 acres, including the stone quarry and one dwelling house, lie between said Railroad and State-street, and the remaining 65 acres, with two dwelling houses, lie west of State-street—all which is in a high state of cultivation, well fenced, conveniently allotted, and in good order. The whole farm, or either of the above parcels, will be sold cheap, and if desired, time will be given for the payment of a large proportion of the purchase money.

Inquire of Luther Tucker, of Albany, Hulbert & Hall, of Auburn, or the subscriber upon the premises. GEO. B. CHASE.

Auburn, Sept. 1, 1846—4t.

SEEDLING APPLE TREES FOR SALE,

BY T. G. YEOMANS, at his nursery, Walworth, Wayne Co., N. Y., one year old, and thrifty, being from about 5 to 18 inches high, at $3 per thousand. Packages of 5000 packed free of charge. 50 cents per 1000 for less. Orders to be post-paid, accompanied with remittances.

Oct, 1—2t.

FARM FOR SALE.

A GOOD farm of eighty-two acres, situated in the town of New-Haven, (Oswego Co.) twelve miles east of Oswego village. Said farm is well adapted to grain and the different grasses. It is pleasantly located, well watered, and buildings in good repair, with plenty of excellent fruit. It is within three miles of the village of Mexico, which affords facilities for manufacturing, the various mechanic arts, &c., &c.

For further particulars inquire of the subscriber, living on the premises, or of Dr. B. E. Bowen, of Mexico.

ALPHEUS HERBERT.

New-Haven, Sept. 1, 1846.—1t*

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ALBANY AG. WAREHOUSE.

DISSOLUTION.—The co-partnership heretofore existing between the subscribers, under the firm of E. COMSTOCK & Co., is this day by mutual consent dissolved. The affairs of the late firm will be settled, and the business continued by LUTHER TUCKER.

Albany, Sept. 9, 1844
ELON COMSTOCK.
LUTHER TUCKER.

PATENT PREMIUM FAN-MILLS.

I. T. GRANT & Co., still continue to manufacture the celebrated Improved Patent Fan-Mills, at the old stand, Junction, Rens. Co., N. Y. These mills have taken the *first premium* at the following places:—New-York State Fair, at the Institute, New-York, the State Fair, at Pennsylvania, and the State Fair at Maryland. The subscribers have no hesitation in saying that these mills surpass anything of the kind ever offered in market. They are the only mill that has ever been produced that will chaff and screen wheat perfectly clean in one operation.

We also manufacture *Grain Cradles* of the very best quality, which have taken the first premium at the New-York State Fair. They are for sale at factory prices, at the following places:—

A. B. Allen's, 187 Water-st., New-York;
John Magher & Co., 195 Front-st., New-York.
Luther Tucker's Ag. Warehouse, Albany;
I. Warren's, Troy; and
Viall & Warren's, Mechanicsville, Saratoga Co., N. Y.

All orders thankfully received and punctually attended to. All goods delivered at Troy, N. Y., free of charge.

I. T. GRANT, &Co., Junction P. O., Rens. Co., N. Y.
Feb. 1—tf [2]

CHERRY STOCKS FOR SALE.

A FEW thousand fine Cherry Stocks, of mazzard varieties, of one years' growth and from one to two feet high, for sale on all pre-paid orders, at $10 per thousand, with no charge for packing, by

J. J. THOMAS,
Oct. 1. at his nursery, Macedon, Wayne Co., N. Y.

FRUIT TREES FOR SALE CHEAP.

AT the Walworth Nurseries, about 7000 thrifty Peach Trees, of the choicest varieties cultivated in Western New York, at $15 per hundred, or 18¾ cents smaller quantities. Also, several thousand Pear, Plum, and Cherry trees, of select varieties. Address, post-paid, at Walworth, Wayne Co., N. Y.

Oct. 1—2t. T. G. YEOMANS

DUTCHESS AGRICULTURAL INSTITUTE.

Located twelve miles east of the village of Poughkeepsie, on the "Wilkinson Premium Farm," in the western valley of Union Vale, Dutchess Co.

THE winter session of this institution commences the first Thursday of October; the summer session the first Thursday of April.

The course of studies in this institution is such as to give the student every facility for acquiring a most thorough knowledge of *Scientific and Practical Agriculture*, with the use of the best modern improved implements; a select Farmer's Library, with numerous Agricultural Periodicals, and instruction in all the collateral branches.

There will be regular lectures, of which the students will make abstracts, to serve both as examinations and as exercises in composition, delivered on

TECHNICAL MINERALOGY—applied to Rural Economy, Commerce, Chemistry, Mining, and Architecture—illustrated by Mineralogical Cabinet, and excursions for observation.

PRACTICAL BOTANY—applied to Horticulture, Veterinary Medicine, Rural and Domestic Economy—illustrated by living specimens, and excursions for observation.

ZOOLOGY—applied to Rural Economy, Commerce, and Manufactures—illustrated by living subjects, skeletons, &c. The Zoonic course will commence with the HORSE.

NATURAL PHILOSOPHY AND AGRICULTURAL CHEMISTRY—illustrated by efficient experiments, by Prof. S. E. HASKEL, late of the Van Rensselaer Institute, of Troy.

Mathematics, in all their branches are thoroughly taught.

A practical knowledge of the Modern Languages is insured by weekly Lectures, Discussions, Orations, Essays, and Conversations in them.

The soil of the farm embraces a great variety, and is well adapted to experimental farming. Its location is pleasant and healthful,—the building extensive and commodious.

Fee for the year, $200, payable semi-annually in advance—which includes Tuition, Board, with beds and bedding, Toilette Furniture, Washing, Mending, Fuel, and Lights.

☞ Farmers, pupils from other schools, or other citizens desirous of attending each or any course of lectures, can obtain admission tickets by applying to the Principal; for a single course for $5, or $3 per course where they attend two or more—payable in advance. Extensive accommodations for horses are provided.

This Institution is under the patronage of the Am. Ag. Association, The Farmer's Club of the Am. Institute, and the Dutchess Ag. Society. Address JOHN WILKINSON,
Principal Dutchess Ag. Institute, Poughkeepsie, N. Y

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Oct 1—2t.

HOVEY'S PATENT SPIRAL STRAW-CUTTER.

THESE machines are thought to excel all others for cutting hay, straw, or corn-stalks. The knives being supported by wings cast on the cylinder, are rendered sufficiently strong to cut the largest corn-stalks with great ease and dispatch, and as the knives are regulated by set-screws, it gives them a great advantage over all other cylinder cutters. There are other cylinder cutters the knives of which are fastened with rings at the end without wings to support them, and on such cutters the knives are wholly unadjustable, except with keys or wedges, the use of which is thought to be an infringement on the rights of Mr. Hovey. The prices of these machines are, for No. 1, $10; No. 2, $12; No. 3, $15; No. 4, $20. For sale at the ALBANY AG. WAREHOUSE, 23 Dean-st., and 10 Maiden Lane.

IMPORTED THOROUGH BRED SHORT-HORN BULL, YOUNG FORESTER.

WM. ATKINSON offers the above named bull for sale, and any gentleman wishing to improve his breed of stock, will find this a most seasonable opportunity of doing so, as Young Forester possesses in an extraordinary degree the splendid qualities for which the Short Horns are so justly celebrated.

He is four years old, his color is a rich roan, his symmetry is perfect, his pedigree unrivalled, and he was bred by one of the most famous breeders in the north of England. It is also worthy of remark, that at the several shows in the province of Canada at which he has been exhibited, he has invariably taken the first premium of his class.

Letters (pre-paid,) addressed to WM. ATKINSON, Guelph, Canada West, will meet with immediate attention.

Oct. 1—2t

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. III. ALBANY, DECEMBER, 1846. No. 12.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

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☞ "The Cultivator" is subject to newspaper postage only. ☜

CLOSE OF THE VOLUME.

......

IN bringing our labors for the year to a close, we would tender our numerous friends and patrons, the most profound thanks for the aid which they have so liberally extended to us. The present number closes the third volume of the new series of the Cultivator, (the thirteenth from the beginning;) and we confidently trust that in our extended intercourse with the public, no diminution of interest has been experienced.

Through the medium of our paper, more than *sixteen thousand* subscribers have had during the present volume, the opportunity of making each other's acquaintance; and so large a number have availed themselves of this mode of communication, that a mass of FACTS in relation to the business of agriculture has been accumulated, which each individual can use as his particular circumstances or condition may render expedient. We cannot doubt that a conviction of the advantages arising from this interchange of ideas, together with a desire to obtain useful information, will induce a general continuance of patronage to our work; and that our next volume will even receive an *increased* number of subscribers.

Besides the *hundreds* of able correspondents directly connected with the Cultivator, our means for receiving intelligence of interest and value to the farmer, are very extensive. In addition to all the approved standard works on husbandry and rural economy in our possession, we have, regularly, the principal European periodicals which are devoted to those subjects,—including those of Great Britain, France, and Germany; and in the pursuit of our grand object—the promotion of the happiness of our countrymen by the improvement of the "soil and the mind"—we shall avail ourselves, as we have heretofore done, of all these and other sources of knowledge.

We have made arrangements for some improvements for our next volume, which cannot fail to be satisfactory to our readers. It will be printed on type entirely new and of beautiful form, procured expressly for the purpose. In the way of *illustrations*, also, we design giving something which we think will be highly gratifying. Our first number will be accompanied by a beautiful portrait of a Galloway bull, one of the very best of its kind that has yet appeared. Other engravings, pertaining to various subjects, will appear from time to time. In short, we are determined that the acknowledged standing and character of the work shall be *sustained*; and in saying this, we believe we offer all the *pledge* which will be required.

We would respectfully invite the agents, and all friends of our work, to continue their efforts for its circulation. By comparing the various agricultural publications, it will be seen that the quantity, (to say nothing of the *quality*,) of the matter furnished in proportion to the price asked, is much in favor of the Cultivator. When this, the liberal commissions we offer, and all other advantages are taken into consideration, we think they cannot fail to secure that share of patronage to which the work, from its actual and comparative value, is entitled.

☞ We publish this month a List of Agents, including, so far as we could complete the list, all those who have done us the favor to act as Agents the present year. That the list is imperfect we are aware, but we hope no one will discontinue his efforts to promote the circulation of "The Cultivator," even if he fails to find his name among the agents. We shall also gladly avail ourselves of the aid of any of our present subscribers, who feel disposed to make an effort to form clubs of seven or fifteen. In this way they might materially increase the circulation of our paper, as it is believed that there are but few neighborhoods where such clubs might not be formed by a little exertion on the part of any of our present subscribers.

☞ We shall be glad to have all the agents for "The Cultivator," also receive subscriptions for "THE HORTICULTURIST." The price of the Horticulturist is $3 per year, from which a discount of 20 per cent. (60 cents on each copy,) will be made to agents.

☞ We send with this number prospectuses and showbills for next year, to all our agents, who will oblige us by circulating them as soon as convenient.

THE HORTICULTURIST, AND JOURNAL OF RURAL ART AND RURAL TASTE.

EDITED BY A. J. DOWNING,

Author of " Landscape Gardening," " Designs for Cottage Residences," " Fruits and Fruit Trees of America," etc., etc.,

MOST of our readers are aware that the publisher of The Cultivator, issued the first number of the above work, on the first of July last, since which time it has been regularly issued on the first of each month, each number consisting of 48 pages, large octavo, printed on fine paper in the best style, accompanied by a beautiful frontispiece, and illustrated by numerous engravings, making it altogether one of the most elegant and useful magazines yet issued in our country. The favorable manner in which it has been received by the public, has been most gratifying both to the Editor and Publisher. The liberal patronage which has already been extended to it, (its subscription already amounting to near 2000,) has secured to it a permanent place among our periodicals; and the public may rest assured that the work will be a permanent one, to which the labors of Mr. DOWNING, as its Editor, will be thoroughly devoted.

THE HORTICULTURIST is devoted,

I. *To* GARDENING, *in a thoroughly practical as well as scientific sense.*

II. *To the* DESCRIPTION *and* CULTIVATION *of Fruit Trees.*

III. *To Gardening as an* ART OF TASTE, *embracing essays, hints and designs on Ornamental and Landscape Gardening.*

IV. *To* RURAL ARCHITECTURE, *including Designs for Rural Cottages and Villas, Farm-Houses, Gates, Lodges, Ice-Houses, Vineries, &c., &c.*

This periodical may, indeed, be considered a continuation of the various works on Rural subjects, by its editor, which have already been so favorably received by the public. It will now be his object to assist as far as possible, in giving additional impulse to the progress of Horticulture, and the tasteful in rural life; subjects at this time so largely occupying all those interested in country pursuits.

To show the favorable manner in which this magazine has been received, we annex a few of the numerous notices which it has received from the press:—

......

NOTICES OF "THE HORTICULTURIST."

The editor, Mr. A. J. DOWNING, of Newburgh, is probably better qualified to conduct such a work than any other man in the country. The number before us contains a great number of articles of great practical value to every gardener and horticulturist in the country. The current number contains 12 illustrations.—*Hudson Republican.*

When it is said that Mr. A. J. DOWNING, the author of Landscape Gardening, etc., etc., is the editor, we think its value is more plainly shown to any who have read his works, than words of ours could do it.—*Cleveland Herald.*

The number before us is rich in instructive matter to the gardener and lover of fruit. There is not a man in this country who has done so much to increase the tasteful appearance and substanial comfort of country residences as the editor, Mr. DOWNING.—*Barre Gaz.*

We have received Nos. 1, 2, and 3, of this excellent and useful work, which we strongly recommend to the notice of all who pay any attention to Gardening, or are attached to rural pursuits, either for amusement or for profit.—*Montreal Gazette.*

The first number of this new journal has reached us a neat large octavo of fifty-six pages, beautifully printed on very superior paper. It has been anxiously expected, and certainly, has not disappointed those expectations—each and every article in this first number being of absorbing interest. Every one at all ambitious of keeping pace with the improvements of the day in gardening, should subscribe for it.—*New Orleans Com. Times.*

The first two numbers of this new work by Mr. DOWNING have been received. We have found much pleasure in assuring ourselves of just what we anticipated of the work in such hands, a *desideratum* for the *advancing* taste of the country in horticulture and rural architecture, to which the work is chiefly to be devoted. We can promise for the work that it will be not only scientific but entirely practical. No person, perhaps, combines more harmoniously the two, than the originator of this new candidate to popular favor. Mr. DOWNING has been for years one of our most successful nurserymen, as his beautiful grounds at Newburgh always testify, and no author by his pen has done more to awaken and cultivate good taste in gardening and architecture.—*New-York Evangelist.*

"THE HORTICULTURIST."—Mr. Cooper, in the last of the series of the Littlepage Manuscripts, correctly remarks that, "notwithstanding the cheapness of land among us, there has been very little progress made in the art of landscape gardening; and if we have anything like park scenery, it is far more owing to the gifts of a bountiful nature than to any of the suggestions of art. Thanks to the cultivated taste of DOWNING, as well as to his well-directed labors, this reproach is likely to be soon removed, and country life will acquire this pleasure among the many others that are so peculiarly its own." We quote this well deserved tribute to the genius and labors of our friend DOWNING, less to praise the art which it discusses or repeat our good opinion of the services it eulogizes, than to remind our readers that a new publication entitled THE HORTICULTURIST has been commenced at Albany by Mr. TUCKER, of the Cultivator, under the editorial auspices of the well known proprietor of the Highland Gardens, and author of popular works on Landscape Gardening, Cottage Designs, Fruit and Fruit Culture, &c., A. J. DOWNING, Esq. The first number commences with July, and we need scarcely say it is in keeping with the editor's other productions. It is to be issued monthly, and may be had in this city of L. Willard, of the News Depot.—*Northern Budget.*

The Horticulturist is well calculated to assume a high rank, and become a very valuable standard work, conducing largely to improvements in horticulture and rural taste. We hail it with great pleasure, as we have no valuable work of this character in this section, and perhaps none in the country. The number before us contains a great variety; it is very instructive and deeply interesting. Such is the improving spirit and taste of the present day, that this work will be duly appreciated, and meet with a very favorable reception.—*Boston Cultivator.*

Its object is to promote rural taste and rural art, not merely in field and garden, but in all that gives character and pleasure to a country residence. The work is conducted by Mr. A. J. DOWNING, a gentleman who has distinguished himself by an octavo volume on Landscape Gardening, Designs for Cottage Residences, &c.; and he seems now to address himself with great ability and earnestness to the good work of making country life agreeable and tasteful, as well as healthful. We hope this magazine will be extensively patronized. It must be exceedingly pleasing and useful.—*Phil. U. S. Gazette.*

Mr. DOWNING unites in a rare degree, qualities as a writer and practical designer and horticulturist, which cannot fail at once to give character and value to this new periodical, and to ensure a favorable reception from an intelligent public. It is a gratifying evidence of the advance of taste and art in rural life, that publications of this character are appreciated—results to which Mr. DOWNING'S clever works have largely contributed.—*Albany Argus.*

THE OLDEST OF ALL ALMANACS.—There is in the British Museum an almanac, written on papyrus, which wants but a little of being 3,000 years old.

HOW SHALL WE IMPROVE?

......

"*The public expect of us vigorous efforts to improve and elevate our agriculture—and we should be untrue to ourselves, did we not endeavor to satisfy every reasonable expectation.*"

This is the language of the late president of the New-York State Agricultural Society, in his annual address delivered in January last. The sentiment is correct, but the question is, has every reasonable expectation been satisfied? During the five or six years that the society has been in operation, has it as yet pursued or devised any plan by which a good and fair analysis of the various crops grown in this State would be put into the hands of every farmer in such a shape that he who farms may read and understand? It is a fact, that in the five volumes of transactions already published, there are many valuable and highly interesting papers; yet, it is equally a fact, that out of the whole mass of agricultural writers, there is scarcely ever a communication sent to an agricultural paper, that refers to a single idea or suggestion which has arisen from the perusal of these papers. Why is this? Is it not partly because there is no system fixed on as permanent, for the arrangement of the various papers of which they consist? And do not the volumes fall into the hands of too few persons who are actually the working practical farmers? Does it not, also, seem probable, that were the prize essays made a small handy pamphlet or volume, unconnected with the transactions, they would be much more read, much more consulted, and consequently more readily aid to "improve and elevate our agriculture?"

Again, there are but few of the papers, I am inclined to think, that have that *utilitarian* character that it is expected such an eminent society should present to the agricultural world. To explain what I mean, I must refer to the proceedings of a like society, the Transactions of the Highland Society of Scotland. These contain many able essays, which have been elicited by high premiums. I need go no further than to mention the essay on the analysis of the oat, by J. P. Norton. No one can read this essay without perceiving that the premium, high as it was, about 250 dollars, would hardly remunerate the author for the time, labor, and expense that he was at, for a period of some twelve months, in preparing his paper; yet this, with the exception of a well-deserved reputation, was all the reward that the author had for a paper that contains all that can, as I believe, be known of the oat. Yet how many will gladly avail themselves of the knowledge of facts hitherto unknown, and now contained in that paper, to increase the value of a standard crop, and one which occurs in nearly all our systems of rotation; how many will reap the benefit of his skilful chemical manipulation, acquired only after long practice, of his patient investigations, and of his laborious researches, for the mere trouble of reading some twenty-five or thirty pages? Essays like this stamp a character on a society, and give its sayings and doings a standing that nothing else will.

An especial and prominent aid, both to the funds and to the premium list, I would now ask leave to point out to the executive board of the N. Y. Society. I have never seen it as yet suggested, nor even spoken of, and should you deem it feasible, I hope the project will receive that aid and support not only from you, but from the whole agricultural press, of which it appears to me well deserving. It is this: That the N. Y. State Society should procure from the Legislature, at the next session, authority to print a certain number for the use of the society, or to procure stereotype plates of the volumes of the Natural History of the State, containing the Agricultural Report now in course of preparation by Dr. Emmons. Here is an opportunity to diffuse, cheaply among the farmers of this State, accurate scientific information, combined with practical knowledge, in the shape of premiums, that will never occur again. The State is bound to print it at any rate, and while the ponderous tomes on Geology, Mineralogy, Botany, Zoology, Conchology, Herpetology, and Palæontology have been paid for and printed by the State, and are without doubt of service to develop the mining, and manufacturing, and trading interests, to the farmer they are of little importance; it is the *Agricultural* Report that will render these of use to the farmer; it is through *it* that he will appreciate *them;* and I cannot too highly commend to you and to your readers, and especially to the Executive Board of the N. Y. State Society, the importance of speedily bringing this matter to the notice of the Legislature. The people of the State, and especially the farmers, from whom, as a matter of course, the greater share comes, have cheerfully paid enormous sums for the knowledge contained in the Natural History of the State. I consider it, therefore, the right of the agricultural community to demand that at least, since they have paid so much for science, a slight attempt at a return should be made on the score of utility.

It is also an excellent investment for a part of the funds of the society, as it will give to them a store of premium material far more valuable than the richest medals or pieces of plate that genius, art, and taste combined, can possibly devise, and one which the intelligent farmers of our State, as I believe, will more eagerly strive after and hold in far higher esteem when gained.

When it is known that but three thousand copies of this work is to be printed, that this single edition will probably have to last the State for many years, as it is not likely that any publisher would undertake to publish an edition of it in the hopes of being remunerated; knowing that many of those on whom he would probably rely, in other cases, for the sale of such a work, had been supplied, and that this would be a cheap, if not the most economical and most useful mode of spreading the information contained, I, for one, hope that some action will be taken right speedily on the subject. J.

Bethlehem, Nov., 1846.

SALT AS MANURE.

......

MR. TUCKER—Having read several articles recommending the use of salt as a manure, I was last spring induced to procure a quantity for the purpose of testing its value.

On the 7th of May, having spread about 30 loads of stable manure on 1¼ acres of sod, turned over in April, I sowed four bushels of western salt on a little more than two-thirds of the ground, leaving a strip through the middle unsalted. The whole was then thoroughly harrowed, and the next day planted with corn. This field lies on the left bank of the Kinderhook creek; the eastern part is a light yellow loam; the western is a gravelly knoll; while the middle is alluvial—composed of sand and mud washed from the river. The salt was sown so as to give each of the different soils a fair trial. The corn was a good crop, producing (with the exception of a small portion shaded by trees,) at least 50 bushels to the acre. It was considerably smaller on a part of the alluvial land to which no manure was applied; but from first to last, *no difference* could be perceived between the salted and unsalted portions of the field, either in respect to the growth of the corn, or to the quantity destroyed by the cut and wire worms, which, however, was not very great in any part. On another field, with a slaty soil, I sowed a bushel of salt, at the rate of about five bushels to the acre, but could see no effect on the corn. The same result followed its application to the potato crop. Four and a half bushels were sown on an acre, leaving a strip on each side unsalted. The vines died in July and August, and the crop of course was light; but few decayed potatoes were seen, except on some low ground. My brother used salt on both corn and potatoes without perceiving any effect. If salt is so valuable as some have supposed, (and of its good effects in some instances there can be no doubt,) what was the cause of failure in the cases stated? Was it in the soil, season, mode of application, or in the quantity applied? Can you give any light on the subject? S. P. ROLLO.

SUMAC.

……

A correspondent at Beaufort, S. C., wishes information in reference to sumac—what species are valuable, and for what purposes, and the manner of preparing the article for market.

The plant alluded to belongs to the genus *Rhus*, several species of which are used in the arts and for medicine. In BROWNE'S late work, "THE TREES OF AMERICA," it is said—"The species most worthy of note, and which have been cultivated for ornament, or have been applied to useful purposes in the arts, are Rhus typhina, venenata, aromatica, and copellina, for ornament; and the Rhus radicans, for medicine, in North America; the Rhus cotinus and coriaria, for tanning and dyeing, of the shores of the Mediterranean; and the Rhus vernicifera, or varnish-producing sumac, of Japan and Nepal."

We believe the Venetian sumac, *R. cotinus*, is considered the most valuable for tanning and dying. This species, according to authors, is found in western Asia, southern Europe, and in some parts of North America. Mr. BROWNE says,—"in a wild state, it is seldom found higher than five or six feet, but when cultivated, often attains more than double that height." * * * "It is easily distinguished from all other species of rhus by its simple obovate, smooth, stiff, lucid, green leaves, rounded at their points, and supported by long footstalks, which do not fall till they are killed by frost, so that the plant is almost sub-evergreen." He states that it was introduced into this country by the late WM. PRINCE, of Flushing, N. Y., about the year 1790, and has been cultivated in various parts. The soil and culture best suited to the shrub, are thus described in Mr. BROWNE'S work. "It prospers best in a dry loam, though it will grow well in any common garden soil. It may be propagated by seeds, or by pegging down the branches flat to the ground, in the spring, and strewing earth over them. Young shoots will rise and take root at the base, which may be severed from the parent stock in autumn, and planted in pots, or in the site where they are to remain. As an ornamental shrub, this species deserves a place in every garden and collection where there is room for it to extend itself. And there is but little doubt but it might be profitably cultivated in many parts of the United States, for the purposes of tanning and dyeing."

The *Rhus typhina*, or what is called Virginian sumac, is a species of which, it is said, there are many varieties in North America. It is described in "The Trees of America" as attaining "a height of ten to twenty-five feet, although under some circumstances it dwindles down to a mere shrub from ten to two feet in height." Like others of the genus, this species is said to be easily propagated by seeds or by cuttings of the roots. A good soil for the culture of Indian corn, is said to be the best for this shrub. "The wood and leaves," says BROWNE, "are used in tanning the finer kinds of leather, and the roots are prescribed as a febrifugal medicine. The branches, boiled with the berries, afford a black, ink-like tincture; and the berries may be employed alone for dyeing red."

The *Rhus venenata*, or Poisonous sumac, is indigenous to North America, and is found in swampy places in all parts of the United States. It is a very poisonous shrub to most persons, though some, from a peculiar constitution, are not affected by it. BROWNE says—"Every part of this shrub, even when reduced to charcoal, is in a high degree poisonous to most persons, either by touching or smelling any part of it." The poison is stated to be sometimes fatal to bees, and an instance is related of a swarm having alighted on a branch, which after being hived, died in the course of a few hours, and were swollen to double their natural size. In the easterly part of Massachusetts, this plant is popularly known under the name of "dog wood," or "poison dog wood." The writer recollects an instance of a family in that section having been poisoned to a dangerous degree by smoke from a fire made of this shrub. On account of its poisonous nature it is seldom used in the arts.

Our acquaintance with the mode of preparing sumac for market is not sufficient to enable us to give particular directions. We believe the plant is usually cut while in a soft or tender state, with a scythe—is carefully dried till the leaves can be pounded off, when it is threshed with flails, the stem, and coarse parts raked out, and the leaves packed in barrels and sold. When it is wished to convert natural plantations into a state in which they can be used, we should suppose it would be best to cut off the old growth, close and clean, in order to obtain a thick stand of young, leafy plants, which can be readily cut and managed.

Since the above was written, we have received the following remarks in relation to the subject, from Prof. JAMES HALL, of this city, for which he has our thanks.

……

There are several species of this shrub or tree, belonging to the genus Rhus, which are useful in the arts. In the United States we have at least eight native species; and one exotic species, cultivated in our gardens, and known as Aaron's beard, or false fringe tree. Among the native species we have two in the northern states which are exceedingly poisonous—the Rhus vernix, known in New England as poison dogwood, and in New-York as poison elder, and poison sumac, and the Rhus toxicodendron, which, in one of its varieties, is a climbing vine, and is known as the poison ivy.

This genus belongs to the order Anacardiacea, one character of which is that it consists of trees or shrubs, with a resinous, gummy, caustic, or milky juice, and this character is true of all the sumacs. In the poisonous species, this resinous or gummy juice contains the noxious matter.

There are also several other species of Rhus, which are of much use in the arts, as in tanning and coloring. Those in the United States which are valuable in these arts, are the *Rhus typhina* and *Rhus glabra*. The leaves of both these species abound in tannic acid, and are much used in tanning morocco, and other light colored leathers.

The leaves and petioles, when dried and powdered, or macerated, when fresh, are much used in coloring, and in many instances have superceded the use of nutgalls, being preferable in many colors. The fruit, which is of a red or purple color, contains much malic acid, or an acid bimalate of lime, and is often used in coloring, both for its tannin and for its acid properties, in changing vegetable blues to reds.

The species used in Europe, both for tanning and coloring, are the Rhus coriaria, and the Rhus cotinus, the latter being the species cultivated in our gardens, before alluded to.

In a late English treatise upon dyeing, republished by Harper & Brothers, New-York, sumac is placed among the coloring substances, and its uses pointed out. Of the two kinds mentioned, the author remarks, that "the *Rhus coriaria* is the best. With peroxide of iron, as a mordant, it imparts a variety of shades, from slate color to black. In calico printing, sumac affords, with a mordant of tin, a yellow color; and with sulphate of zinc, a brownish yellow. A decoction of sumac reddens litmus paper strongly; gives white flocks with the proto-muriate of tin; pale yellow flocks with alum; blue flocks with red sulphate of iron, with an abundant precipitate." Further information regarding the use of sumac may be found in the treatise above cited, on pages 291 and 292.

The American species previously named, possess the qualities required both for tanning and for dying. The Rhus typhina grows in rocky and gravelly soils, frequently along the margins of ledges of granite, and about old fences. The Rhus glabra often takes possession of barren, waste fields, when the soil is stony, and abounds in barren stoney soils. I am not aware of any attempts made to cultivate it, but it could easily be produced in large quantities in waste fields and barren places, which now produce no valuable shrub or tree. The stoney and gravelly soils of New England, and the waste, barren lands of some of the southern states, would produce this shrub in great abundance.

It is easily cultivated, and requires little care, and we should suppose would prove profitable, since nutgalls form an important item among our imports.

The first species usually attains a height of 8 to 15 feet, and rarely forms a tree of 20 feet high and six or eight inches in diameter. The second species is usually from 5 to 12 feet high, being usually a little less than the last species, and furnishing an abundance of fruit and foliage when four feet high. These shrubs, with even tolerable care from being broken down, are rapid growers, making several feet of wood during a single season, though growing slower as they advance in age. Young plants grow with little care, and either seeds or the young shrubs can be readily obtained.

OPERATION OF PLASTER.

******

Mr. Tucker—There seems to be a great diversity of opinion as to the reason why plaster or gypsum fails to benefit such a large portion of our Atlantic coast, Long Island, and New-Jersey, particularly. Mr. Ruffin of Virginia, in a work on Calcareous Manures, advances a theory based on his experience as a practical farmer, that appears to me to be more satisfactory than any other I have seen, and I am somewhat surprised that his theory has never found its way into our northern agricultural journals.

I made a visit to Virginia last winter, preparatory to removing there, and while there I made particular inquiries in relation to the extensive marl formation which underlays nearly the whole eastern portion of the state, below the falls of the rivers, and its effects upon the soil. I found it to be extensively and profitably used, and producing important and permanent changes in the soil; so much so, that clover cannot be made to grow at all until marl, or its equivalent, lime, is applied. The marl contains from 30 to 80 per cent. lime, which is the principal if not the only fertilizer contained in its composition. I inquired how plaster succeeded on clover, and the almost invariable reply was, it does no good whatever until the land is marled or limed. I inquired the reason of this, and was referred to Mr. Ruffin's work on Calcareous Manures. I there found what appeared to me to be a very satisfactory reason, and I will give you a brief abstract. He says that the most of the soils of eastern Virginia, were found upon analysis, to contain but a slight trace of calcareous matter, and with the exception of the land along the margins of the rivers, which he terms neutral soils, he calls them all acid soils; and the presence of sorrel on the land he considers an indication of acid soils. Sorrel grows abundantly on all land which he terms acid. Oxalic acid is the acid of sorrel. Now, sowing on plaster in the usual quantity, that being a sulphate of lime, the oxalic acid has a strong chemical affinity for the lime; the lime leaves its combination with the sulphur, and combines with the oxalic acid, and forms an oxalate of lime, and sets the sulphur free to combine with iron or any other ingredient that it can find. Apply a good dressing of marl or lime, and it combines with the acid and neutralizes or destroys it, and as a proof of this, sorrel is no longer found. Plaster applied then is left free to act, and produces the most satisfactory results, frequently doubling the crop.

Long Island and New-Jersey have soils somewhat similar to Virginia. I can speak more confidently of Long Island, as that is my place of residence; its soils produce sorrel plentifully. Lime has been used but little, and in many cases with no perceptible effect, and plaster, with a few isolated exceptions, has totally failed. I hope that some of your Long Island and other readers who are similarly situated, will make the experiment, and see if like causes will produce like effects. The experiment need not cost them but little money or labor.

While on a recent visit to Dutchess Co., a friend informed me that the prevailing opinion in that county was, that plaster applied to one field, injured an unplastered field adjoining, as much as it benefitted the one that it was applied to, and that some went so far as to say that if a piece of woodland was left amidst cleared land, and that cleared land plastered, the timber commenced decaying and dying. He told me of an instance that went strongly to prove the truth of that opinion. An old farmer had a very fine meadow, in a creek bottom. He commmenced plastering his upland lying around, and adjoining it. His meadow, which had never before failed to produce luxurious crops of grass, began to fail, and continued to do so until it was hardly worth mowing. He then commenced plastering it, and its ancient fertility was at once restored. Now what can be the cause of that? Perhaps our chemists are the most proper persons to judge; but I can give my own opinions, as they do not cost much. The idea at once occurred to me that it might be caused by the absorption of ammonia from the surrounding atmosphere, by the plaster, (as ammonia and sulphuric acid have a strong affinity for each other,) that the unplastered land was deprived of its due share from that source, as plants are said to derive a large share of their ammonia from the atmosphere. Perhaps some of your able correspondents can enlighten us as to the cause of it. G. P. Lewis.

Huntington, L. I., Oct. 14th, 1846.

PLANTATIONS OF PINES.

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There are quite extensive tracts of country, especially along the sea-board, which now lie nearly in a state of barrenness, that might be made to yield a tolerable income, if planted in trees. It might be difficult to make hard-wood trees flourish on these light lands, but pines would generally grow without much trouble. In the easterly part of Massachusetts, many plantations of pine have been formed on old lands, which, though formerly cultivated, had become wholly worthless for agricultural purposes. The Barnstable County, (Mass.,) Agricultural Society, lately awarded a premium to Mr. Amos Otis, of Barnstable, for two plantations of pines. Believing that his account of the mode of planting, &c., will be valuable to others, we give from the Sandwich *Observer*, the substance of a paper submitted to the society mentioned. The Pitch pine, was the kind chosen in this case, but the process of cultivation would probably answer equally well for White pine. It will be noticed that the value of the land is stated to have been only from one dollar to two dollars per acre, before being planted with trees; and that after an outlay in planting of only three dollars per acre, it is made to pay an *annual income* of one dollar per acre, for twenty-seven years. .....

The two lots of pines which I offer for examination, are situate in the East Parish in Barnstable, and contain, one two acres, and the other seventeen. The suface is uneven, and covered with moss; and excepting a few acres has not been cultivated for many years. The soil is mostly a gravelly loam, and is not what is generally called a pine soil. The trees on the north side of the two acre lot, were planted in April, 1833, and now average thirteen feet in height, and measure one foot from the ground, four and one-half inches in diameter. Those on the south side were planted the next year, and average twelve feet in height and four inches in diameter. The seventeen acre lot was planted in the years 1840, '41, and '42. Nearly all the trees are of the last planting, and they average nearly four feet in height.

The exact number of trees on each acre I cannot state; but I estimate that the average is much greater than is required by the rules of the society. There are some open places, but on most of the ground there are as many trees as it would be profitable to allow to remain. On one acre where the soil is much better than the rest, and in the bottoms, there are no trees. The pitch pine will not grow in still green sward and where the surface is a loose barren sand it does not flourish.

Seed. The last of October is the best time to gather pine balls. Select those that are of the growth of the present year, spread them on a tight floor—a chamber having windows opening to the south is a desirable place—and before spring the action of the sun and of frost, will open most of the cones, and the seed will drop out. The cones that remain closed may be put into pans and placed in a warm oven to open. Before planting, the wings should be rubbed off the seed, and all extraneous matter carefully winnowed out. A bushel of good balls will yield three pints of cleaned seed, which is a sufficient quantity for three acres.

Cost of Planting.—Previous to 1842, I planted by plowing furrows, eight feet apart, lengthwise of the field, and dropping and covering the seed by hand, in the bottom of the furrows. Some little was planted with a hoe, without first plowing. Both of these methods are too expensive, if a large quantity of land is to be planted. In the spring of 1842, I had a machine constructed, on the principle of a corn planter, with which a man and a horse can plant six acres in a day. The machine is simple in its construction, and cost less than five dollars. It operates well in all soils where it is advisable to plant the Pitch Pine. The cost of the seed and planting with the machine is less than one dollar per acre.

Growth, Profit, &c.—The first three or four years, the growth of the Pitch Pine is slow; but when it is planted or comes up in old fields, its increase in size for twenty years, will average for each year one foot in height, and one third of an inch in diameter. The value of land suitable for planting the Pitch Pine is not usually estimated at over two dollars per acre, and it is frequently sold for one. The cost of an acre planted, will not on an average exceed three dollars. Where wood is worth three dollars a cord standing, if no accident happens to the pines, the value of the annual growth for twenty-seven years may be safely estimated at one dollar for each acre. This rule will not apply to pine woodlands, for the growth there is not half so rapid as in old fields.

But there are drawbacks that must be taken into the account before the balance of the *profit and loss* sheet is struck. Interest on the capital invested, the risk of fire and the greater risk of destruction from the ravages of the speckled catterpillar, or pine tree worm. It is only a few years since these pests first made their appearance in this region. Their ravages are principally confined to pines growing on lands formerly cultivated. Wherever they appear, there are myriads of them They completely cover the branches and in a few days strip the tree of all its foliage. Their name is legion. Very few trees survive their attack, and if they live, their existence is sickly and their growth stunted. Their ravages have thus far been confined to the light sandy soils. Last year almost every tree on a twelve acre lot of mine was destroyed by this catterpillar. Others suffered also. This year they have again made their appearance, and in some places the ground and trees are literally alive with them. If their ravages are not stayed, it is not advisable for any one to plant the Pitch Pine, particularly on light soils and in the vicinity of places where the catterpillar has already made its appearance. However there is no reason to be discouraged; if one species of trees do not succeed, we can try another. The curse of insects is chargeable to the murderous sportsman. Birds were appointed to hold the insect tribes in check, and the destruction of one is the increase of the other. But, gentlemen, fear of the ravages of insects should deter no one in his attempts to cultivate trees. With all its drawbacks, I am satisfied that it is more profitable than three-fourths of the crops now raised by the farmers. Nearly two centuries ago, at a time when Cape Cod was covered almost by one unbroken forest, our ancestors, year succeeding year, in their town meetings, passed votes offering encouragements for the growth of timber, and imposing fines and penalties on him who should wantonly destroy a single tree. *Then* the value of timber scarcely exceeded the cost of carrying it to market; as the value is tripled; yet till very recently no one has thought it a public duty to encourage the growth, or to adopt measures for its preservation. We have paid bounties for the destruction of birds—only another form for granting gratuities for the propagation of worms and noxious insects,—we have converted our woodlands into pastures; and all that the cattle could not destroy man has deemed it meritorious to cut down and uproot;—nothing has been left for beauty or shade, and nothing to break the force of the sweeping gale. But there is beginning to be developed in this community, another and a better feeling. It is perceived in the cultivation of trees; pleasure and utility may be combined; that our worn out and desolate hills may be covered with verdant and beautiful forests; that our village streets may be adorned with shady rows; and that our gardens and fields may be studded with fruit trees, without diminishing the pasturage or fertility of the farm. One object of the Agricultural Society, is to foster and encourage this feeling, and whatever aid I can render will be most cheerfully contributed.

Amos Otis.

Yarmouth Port, Oct. 6, 1846.

BLACK WEEVIL—*Curculio granaria, Linn.*

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This insect, called by some "black weevil," Dr. Harris describes as being, in its perfected state, a slender beetle, of a pitchy red color, about one eighth of an inch long, with a slender snout slightly bent downwards, a coarsely punctured and very long thorax, constituting almost one-half the length of the whole body, and wing-covers that are furrowed, and do not entirely cover the tip of the abdomen. This little insect, both in the beetle and grub state, devours stored wheat and other grains, and often commits much havoc in granaries and brew-houses. Its powers of multiplication are very great, for it is stated that a single pair of these destroyers may produce above six thousand descendants in one year. The female deposits her eggs upon the wheat after it is housed, and the young grubs immediately burrow into the wheat, each individual occupying alone a single grain, the substance of which it devours so as to leave nothing but the hull; and this destruction goes on within, while no external appearance leads to its discovery, and the loss of weight is the only evidence of the mischief that has been done to the grain.

"In due time the grubs undergo their transformation, and come out of the hulls in the beetle state to lay their eggs for another brood. These insects are effectually destroyed by kiln-drying the wheat; and grain that is kept cool, well ventilated, and is frequently moved, is said to be exempt from attack."

Mr. Clark Rich, of Shoreham. Vt., gives us an account of the manner in which this insect attacked some stored grain in his neighborhood, and the means he took to destroy it. He states that the insect first made its appearance last fall, (1845,) in some boxes of wheat which had been standing for some time undisturbed in a mill. In the following spring, the insect became troublesome. It had been previously wholly unknown in that quarter. The insects soon became so numerous, that grinding was suspended for a time. He made experiments to kill the insects with smoke. He found he could kill them with brimstone smoke, by placing them in the farther end of a stove pipe, though so far from the fire as not to be hurt by the heat. He could also kill them in the same situation by tobacco smoke. He next tried to destroy the insects by fumigation. Having made the mill as tight as he could, he burnt a hundred pounds of brimstone in the course of twelve hours. After this, the insects appeared torpid, but on being taken to the air soon revived. He then tried tobacco, and burned about 150 lbs. This, to appearance, did not disturb them. From these unfavorable results, he deemed it of no use to continue the process any longer, though he thinks that in a brick or stone building, with a tinned roof, every insect or other animal might be killed by brimstone smoke.

He then applied hot water, and gave the mill a thorough scalding, using all the water that could be heated in three large kettles during 2½ days. To prevent future increase, he had all the hollow places to be got at filled with lime; and the small holes and cracks with mortar, and the walls were white-washed.

Soon after this, the mill was put in operation; an insect was only seen occasionally; but in the course of three weeks, there was a considerable increase; though they have since remained stationary, and are not so plenty as to drive away customers. He says no insects were to be found in the smut room, or the machinery room, where it is damp.

Mr. R. says he has heard that this or a similar insect is at times troublesome at Troy, but that he found none in a mill he examined at Hartford, Ct., and none at Rochester, and several other places along the Erie canal, except at one mill in Lockport, and but few there. He feels satisfied that it is not destined to be as troublesome in this region as was at first supposed.

SELECTING FINE FRUIT.

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There are several qualities to be taken into consideration, in deciding what fruits are most worthy of cultivation in the orchard and garden. Excellence of flavor is of course the first and all-important requisite, while productiveness, uniformity in quality, a fair surface, free and vigorous growth, and even large size and handsome appearance, are all to be taken into account. A very few fruits have all these together; in such cases the task of selection is not difficult. But such instances being extremely rare, it becomes necessary to choose by balancing advantages and defects.

No fruit of inferior *flavor* is ever to be regarded as first rate. A very prevalent disposition is to judge mainly by external appearance. Hence the Twenty Ounce apple, the Alexander, Maiden's Blush, and Red Astrachan, stand quite as high in reputation as other varieties of decidedly finer quality. Yet they are not all to be summarily rejected. The Red Astrachan is a free growing tree, a good bearer, quite early, of large size, and great beauty of appearance, qualities which, in some degree, at least, counterbalance its somewhat coarse texture and austere flavor. The Alexander is also of free growth, and though of only second rate richness in flavor, is always fair, and a fine bearer. The Maiden's Blush is a most abundant bearer, and the fruit uniformly fair and handsome, and of delicate texture, but it is sadly deficient in richness of flavor—so much so, that even swine, who soon become good judges, seem to hold it in decided contempt, while they can get other good varieties by its side. The Twenty Ounce apple has been highly praised at Boston; but independent of large and fine appearance, and great productiveness, it appears to possess but little merit. Even for cooking, it is inferior, unless an artificial flavor is given to it by sugar and spices. The disposition to admire and extol large and handsome fruit is exhibited among other kinds. If the Bolmar plum were no larger than a Green Gage, it would be but little known; the large Red Cheek Melacoton and Lemon Cling, have depended for much of their celebrity on their size; and even Crawford's Early would be a little curtailed in its reputation for quality, if it were no larger than an Early Ann.

On the other hand, the Seckel pear, the richest of all pears, is of dull appearance, small size, and slow growth —the latter quality however, securing it from the fire blight.[*] Buffington's Early has scarcely an equal among early apples, in flavor and texture; but it never bears good crops. The Sine Qua Non apple, and the Early Tillotson peach are excellent bearers, and of the best flavor, but the young trees in the nursery are of slow and scrubby growth. Hence, notwithstanding their great value, they will always be unpopular among nurserymen, though they grow freely when they become larger.[*] Nor are nurserymen wholly to blame for this. For as buyers of fruit usually prefer specimens of showy appearance; so buyers of trees commonly show most respect to those of large and handsome growth merely.

The number of varieties of fair or handsome appearance, free growth, and of first rate quality, is very small. It includes the Yellow Harvest, Late Strawberry, and Gravenstein apples; the Madeleine, Bloodgood, Virgalieu, and perhaps the Bartlett pear; Huling's superb plum; and a part of the early, and most of the medium and late peaches, best known for their excellent qualities.

It is a little singular that some varieties of slow growth in the nursery rows, afterwards become large trees in the orchard, as the Esopus Spitzenburgh and Fall Pippin. On the other hand, some of the most handsome, straight, and rapidly growing sorts while young, always remain rather small trees, as the Late Strawberry, and Tallman Sweeting.

The object, principally, of these remarks, is to direct more attention to securing fine flavor and quality, in making selections; and to discourage the common error, of looking too much at large size and showy appearance. Until this object is attained, fruit culture must always be at a low ebb; we shall never see fine fruit gardens so long as a Pound-Sweeting or a Twenty-Ounce is preferred to a Swaar or a Rambo; or a pumpkin or a mammoth squash to a Green Gage, or a Seckel.

THE POTATO.

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Mr. Editor—I send you a copy of the description of the potato, as given by Gerard, in 1597, in his own language, the orthography only corrected.

How the Indians became possessed of the potato, it is impossible to tell. Probably, like Indian corn, it was brought from a tropical climate by degrees, from tribe to tribe. Its native country is Peru, in which country it is now to be found growing wild on table lands, and perhaps in other parts of Central America.

Yours, &c., Joseph Breck.
Boston, Oct. 26, 1846.

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[From Gerard's Herbal, first published in London, in 1597, afterwards enlarged and improved, by Thomas Johnson, and published in London, 1633.]

OF POTATOES OF VIRGINIA.

The Description.

Virginia Potato hath many hollow flexible branches trailing upon the ground, three square, uneven, knotted or kneed in sundry places at certain distances, from the which knots cometh forth one great leaf made of divers leaves, some smaller and others greater, set together upon a fat middle rib by couples, of a swart green color, tending to redness; the whole leaf resembling those of the Winter Cresses, but much longer; in taste at the first like grass, but afterwards sharp and nipping the tongue. From the bosom of which leaves come forth long, round, slender foot stalks, whereon do grow very faire and pleasant flowers, made of one entire whole piece, which is folded or plaited in such strange sort, that it seemeth to be a flower made of fine sundry small leaves, which cannot easily be perceived except the same be pulled open. The whole flower is of a light purple color, striped down the middle of every fold or welt with a light shew of yellownesse, as if purple and yellow were mixed together. In the middle of the flower. thrusteth forth a thick flat pointal, yellow as gold, with a sharp green prick or point in the midst thereof. The fruit succeedeth the flowers, round as a ball, of the bigness of a little Bullessee or Wild Plum, green at the first, and black when it is ripe; wherein is contained small white seed, lesser than those of the mustard. The root is thick, fat, and tuberous, not much differing either in shape, color, or taste from the common potatoes, saving that the roots hereof are not so great, nor so long; some of them are round as a ball, some oval or egg-fashion; some longer and others shorter; the which knobby roots are fastened unto the stalks with an infinite number of thready strings.

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[*] It is not intended here to say that rapid growth alone is always most liable to the attacks of this malady. Some varieties ripen their wood early, which being also of compact texture, they nearly always escape. Others, though perhaps less thrifty, have spongy or succulent wood, ripening badly; and they frequently suffer

[*] Early Tillotson trees of several years growth, standing side by side with other peach trees noted as thrifty when young, and all treated precisely alike, are as tall as any of the others.

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Battata Virginana sive Virginianorum et Pappus.

Virginian' Potatoes.

[Here follows a cut of the plant, with roots and tubers.]

The Place.

It groweth naturally in America, where it was first discovered, as reports *C. Clusius*, since which time I have received roots hereof from Virginia, otherwise called Norembega, which grow and prosper in my garden, as in their own native country.

The Time.

The leaves thrust forth of the ground in the beginning of May; the flowers bud forth in August. The fruit is ripe in September.

The Names.

The Indians do call this root Pappus, meaning the roots; by which name also the common potatoes are called in those Indian countries. We have the name proper unto it mentioned in the title. Because it hath not only the shape and proportion of Potatoes, but also the pleasant taste and virtues of the same; we may call it in English, Potatoes of America or Virginia.

Clusius questions whether it be not the *Arachidna* of *Theophrastus*. *Bauhine* has referred it to the Nightshades, and calleth it *Solanum tuberosum esculentum*, and largely figures and describes it in his prodromus, page 89.

The Temparature and Virtue.

A. The temperature and virtues be referred unto the common potatoes, being likewise a food, as also a meat for pleasure, equal in goodness or wholesomnness unto the same, being either roasted in the embers, or boiled and eaten with oil, vinegar and pepper, or dressed any other way by the hand of some cunning in cookery.

B. *Bauhine* saith that he heard that the use of these roots was forbidden in Bourgandy, (where they call them Indian artichokes,) for that they were persuaded the too frequent use of them caused the leprosy.

DESTROYING THE GRUB AND WIRE-WORM.

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In a recent conversation with an intelligent farmer of Cayuga Co., N. Y., he described the method by which he saved his corn crop from the destruction of the wire-worm and grub. The former of these depredators had appeared in prodigious numbers—something less than a bushel per square rod of land, and their ravages were great. He ascertained by observation that they did not descend deep into the soil at the usual time of plowing sward land for corn, but continued mostly among the roots of the grass. His object, therefore, was to bury them alive. This he accomplished by turning over the sod with a powerful team, to a depth of at least eight inches, the soil being rather heavy. The surface was then pressed down evenly and firmly with a heavy roller. By this process several inches of compact soil lay above the region of the wire-worms, and as a consequence, whenever they attempted to pass upwards to the surface, they met with too formidable a resistance to penetrate. Hence, they continued with the grass below, and perished with its decay. Whether this be the true explanation or not, one thing was certain,—that where the corn was formerly almost wholly destroyed, it is now full and even in the rows, without the usual numerous vacant spaces over the field, always existing under the old practice.

By a similar process of observation, he was enabled to destroy the grubs. He discovered that these depredators, instead of remaining at the surface, like the wire-worm, descend deeply, and hence that deep plowing brings nearly all of them to the surface. Hence by the use of a heavy roller, many of them were crushed, and the remainder immovably compressed in the solid earth, till a fine toothed harrow passing over the surface, tore out and destroyed them. The utility of this practice, like that of the former, has been amply proved by successful experiment.

Another practice of the same farmer, though not new, is worthy of notice. He has been enabled to keep his flock of sheep of the very finest animals only, by always doing his own picking for sales, instead of leaving this to the purchaser, as is too frequently the case. Or, at any rate, no sheep buyer is permitted to select from his flock, unless he is willing to pay fifteen or twenty dollars per head, which, of course, he will not do. A perseverance in this course for a long series of years has so improved his sheep, that though originally nothing uncommon, they will now compare creditably with many of the very finest in market.

DRAINING AND FENCING.

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Mr. Editor—Although the advantages of draining are almost universally conceded, yet, how rare it is, to see in our travels in this country, well drained or thoroughly reclaimed swamps, or wet, low lands. Such lands, abounding in almost every district, when neglected, are not only unproductive and unprofitable, subtracting materially from the value of a farm, but are unsightly, and more or less prejudicial to health. On the contrary, when reclaimed, such lands, of all others, are the most interesting and productive. They have been depositories for freshets and floods for ages, and have received more or less of the manure and surface soil gradually carried from time to time from the surrounding knolls and hill sides. When thoroughly drained and stirred up by proper cultivation, and the inert vegetable substance brought into action by the application of the usual decomposing agents, such lands are distinguished for their enduring fertility.

Much money, however, is fruitlessly expended in the operation of draining. Very few of our native American farmers are skilled in the art, and like every other branch of farming, it will *pay best* when well performed. It is by no means necessary that a bog or swamp should have a "great fall" or inclination, to be well drained. It is customary to dig the ditches down *to* the gravel, instead of digging three or four inches in depth into the gravel stratum, which, by the bye, is *one* great secret in the business of draining. Where springs abound, either above or below the surface, they must, of course, *all be let down into under-drains*. An expert ditcher will not often be deceived about the location or source of blind springs, *under* the surface, which generally do most mischief. Such springs develop themselves by the peculiar character of the vegetation which covers them, or can be discovered by the *tread*. The location of drains is of the utmost importance. Twenty-four to thirty inches will in most places be found a sufficient depth. Thirty inches wide at the top, sloped to eighteen at the bottom, are the common dimensions of a good ditch; but if the gravel substratum be more or less shallow, the depth should always be determined by it. Stones, for many reasons, form the best material for filling such drains. After shovelling the bottom of the drain entirely clean of gravel or mud, the first layer of stone for a foot in depth, should be set in a vertical position, leaving no opening or culvert; the stone afterwards may be leveled promiscuously within eight inches of the surface, reserving the smallest stone for the top; this done, cover the stone, first, with the inverted sod, carefully cut from the surface of the ditch, and preserved for this purpose. Lastly, fill in over the sod all the earth thrown out by digging, which will elevate the surface, but it will settle down in due time. This method of draining I have practised, and prefer it to all others. An inexperienced farmer would profit by employing an experienced ditcher from Scotland or Ireland.

Fences have become as diversified and various as they are necessary and useful: the address of the late N. Biddle, Esq., of Philadelphia, to the contrary notwithstanding. He pronounced them absolute nuisances, and an annual tax upon the farmers of Pennsylvania of $10,000,000, and recommends the European system, dispensing entirely with fences, using landmarks, shepherds, and dogs, in lieu of them.

The common worm fence, with stake and rider, is in almost general use in the interior of this state. This fence is made eight rails to a pannel, the worm four feet wide, stakes set *out* two feet at the corners; one foot more may be added which cannot be plowed, making ten feet of land in all, occupied by the fence. Such a fence, on a farm of 100 acres, divided into fields of ten acres each, with a lane through the centre, will occupy about six acres of land. Capt. Hall, the English tourist, described our worm fences as *zig-zag*, and the most unsightly and disgraceful looking things he ever saw. The scarcity of rail timber, however, will make this kind of fence give way to something more neat and economical.

Locust posts and five chestnut rails constitute one of our best fences. Since iron has depreciated, some of our enterprising furnace proprietors have cast a neat article, with five holes, designed for posts, which promises fair to *take* with our farmers. Posts made from white oak, or chestnut wood, lacking in durability, are troublesome and expensive. The farmers of Salem county, New-Jersey, are now partial to a kind of worm fence, without stakes and riders; they insert an iron rod three-eighths of an inch thick, through the corners; the rod is turned at the bottom, and bent over the top rail so tight as to make the fence withstand a tempest. In this fence, there is perhaps more economy than any other now in use; it occupies about half the ground taken up by a stake and rider fence. Five to six rails are sufficient for a pannel, making a handsome fence, resembling a wave, at a distance. I put up some myself for a trial; I am much pleased with it. Using good chestnut rails, set on flat stones for corners, renders such a fence almost indestructible.

W. **Penn Kinzer.**
Springlawn Farm, Pequa, Lancaster Co., Pa.

WEANING FOALS.

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Mr. Tucker—About three weeks since, I took from a couple of mares their foals, and put the latter into a meadow to wean. In order to keep them quiet, I put in with them a young mare, with whom they and their mothers had constantly run. In a few days it was discovered that one of the foals was in the habit of sucking this mare, and on examination I found that on one side there was something of a swelling or bag, and there was a milky substance contained on this side. One of the foals, also, was evidently receiving an injury. The mare was then removed; but I found the swelling still increasing along the belly towards the fore legs; the legs also began to swell, and even the hind legs swelled to such a degree that she could not trot, and it appeared to require an effort to move the left hind one, that being much more swollen than the others.

Some rowels were put in the belly, but still the swelling continued to spread at the rate of about half an inch round, in two days, while the milk corrupted in the bag and rather diminished in quantity.

Perhaps by inserting these facts in the Cultivator, it may save others from like trouble.

D. C. C. **Wright.**
Granville, O., Oct. 9, 1846.

Bed-Bugs.—The common bean leaf is said to form a good *trap* for catching these troublesome vermin. The leaves are placed, bottom upwards, in suitable places, and the bugs get their legs tangled in attempting to crawl over them. Try it.

BEES—COMPOSITION OF HONEY.

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Mr. Editor—There is much in the economy of the bee that is wonderful, and by me is little understood.

I have, for thirty years, been a keeper of bees, and a careful observer of their operations; still I am ignorant of many things pertaining to their natural history. I have, however, discovered one thing that has interested me respecting the process by which their honey is made, and many years of observation have confirmed me in the correctness of my belief.

The honey is made by the combination of two materials, the *pollen* of the flowers, which the bees carry in upon their legs, and the *nectar* which they carry in a sack in their bodies. The pollen is deposited in the cells of the comb, and dissolved by a chemical solution, with the nectar. Just at the time when the solution is complete, the cell is capped over, and its contents reserved for future use.

I have found this process going on in several stages. I have found cells filled or partly filled with the dry pollen, of a bright yellow color, as it appears upon the legs of the bees. In other cells I have found it a little moistened, and turned to a little darker yellow. In other cells I have found the top dissolved to liquid honey, while the undissolved pollen was at the bottom. In other cells I have found the whole mass partially dissolved, having the appearance of *granulated* honey. I have been satisfied of these facts by a particular examination of many hives, which I have taken up within the last fifteen years. Recently a young swarm left a hive after making three pieces of comb about six inches in diameter. I found in this comb no honey, but deposits of pollen in the bottom of the cells, as above described. Had they continued, this comb would doubtless have soon been filled with pure honey, the deposits of pollen being reduced to a liquid state.

The general belief I suppose to be, that the pollen, which they carry in upon their legs makes the bee-bread, and that the honey is only a deposit of the nectar, which they carry in in their bodies. But the bee-bread, so called, I believe to be nothing more nor less than the damaged materials of the honey, left in an unfinished state, when their operations are arrested by the frosts of autumn, or by any other cause.

When the process is left unfinished, the materials soon become rancid, and mould: and being unfit for food, it is left in the cells until the next spring, when the bees may be seen carrying out such portions of it as can be detached from the cells, and what cannot be, is left to accumulate from year to year, till the old hives become very much filled with the bee-bread.

Very great quantities of pollen are carried into every new hive—enough, I presume, to fill every cell—and yet, in a new swarm, you find very little bee-bread, and that only in the outskirts of their comb, where their works were arrested in an unfinished state at the approach of autumn.

Here I would suggest that many bee-keepers suffer loss by neglecting to put caps or small boxes upon the tops of their hives at the close of the swarming season, or about the first week in July. I use boxes about a foot square, and six inches deep, and some of my best swarms fill two in a season, and yield me from twenty to forty pounds of honey.

Some people have complained that they cannot make their bees work up into the boxes. But I have found no trouble in this respect. When I make my hives I make about six holes with an inch auger, in the top of the hive, and cut out the wood so as to bring two or more of the holes into one, and place the holes so that they will come near the edge of the box, that the bees may have an easy access to the box, and be able to ascend its inner side. I have a mouth to the box, the same as to the hive, that when they commence operations, they may not be obliged to pass through the original hive to their work.

When I wish to remove an old hive, I put a box of suitable size beneath, and when the breeding season is over, I remove the old hive, and put a new one in its place.

The most convenient way to take up these boxes or caps, is to remove them in the evening, or early morning, carry them a few rods distant from the bee-house, turn them bottom upwards upon the ground, and put over them a large box, such as is used to carry dry goods in, having a small hole or two, or a crack in the top. After the sun is up, and it has become so warm that the bees will fly, you may punch the box of bees with a stick, and if you please, occasionally lift the large box upon one side, when the bees in great numbers will escape and return to their old habitation, where an empty box should be previously placed to receive them.

There is some difficulty in expelling the bees from an old and deep hive, which has been their chief habitation. They are not easily driven out by the process above described. I have known two methods to effect this; one is to put the hive bottom upwards, in a tub, and turn in water, and thus drive them out; the other is to split the hive open with an axe; cover them with a large box, and drive them out, after they are vanquished, as described, in driving them out of the small boxes. But of the success of these methods I cannot speak from my own experience.

Yours, &c., E. D. ANDREWS.

Armadee, Mich., 1846.

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REMARKS.—It will be noticed that in tne above communication, our correspondent advances the idea that honey is composed of two substances—the pollen and the nectar of flowers. The idea is new to us, but may, notwithstanding, be correct. There are, undoubtedly, many things yet to be learned in the economy of bees, and we think the subject of Mr. ANDREWS' theory deserves investigation.

We have turned to some authorities to see what is the generally received opinion in regard to the composition of honey.

LIEBIG, in his Animal Chemistry, speaks particularly in regard to the production of wax from honey. He holds that wax may be formed from honey, without any other substance; and the argument which he designed to draw from this was, that in the animal economy, fatty matter may be formed from sugar—a theory in opposition to that held by BOUSSINGAULT and DUMAS, that fat could only be assimilated from oil ready formed in the food. But LIEBIG remarks—

"In order to produce wax in the manner described, the bees require no pollen, but only honey."

This is sufficient to show that he believed pollen unnecessary for the formation of honey. He adds—

"I cannot, therefore, believe that pollen furnishes food for the bees, but I think they only swallow it, in order, by mixing it with honey and water, to prepare the liquid food for the grubs."

The use of pollen in preparing food for the young bees, or larvæ, is then, according to LIEBIG, the only purpose to which it is devoted.

BEVAN speaks more fully in regard to the composition of honey, as will be seen from the following extract:

"In the Philosophical Transactions for 1792, Mr. Hunter has stated, that whatever time the honey bags may be retained, they still remain pure and unaltered by the digestive process. M. Polhill, a gentleman to whom the public are indebted for several articles in Rees's Cyclopedia appertaining to bees, is also of this opinion. Messrs. Kirby and Spence do not admit this statement; as the nectar of flowers is not of so thick a consistence as honey, they think *it must undergo some change in the stomach of the bee*. They are countenanced in this opinion by Swammerdam and Reaumur: the latter has observed that if there was a deficiency of flowers at the season of honey-gathering, and the bees were furnished with sugar, they filled their cells with honey differing in no other respect from honey collected in the usual way, but in its possessing a somewhat higher flavor, and in its never candying, nor even losing its fluidity by long keeping. The same has been observed when they imbibe the juices of sweet fruits, for bees do not confine themselves solely to flowers and honey-dewed leaves: they will sometimes very greedily absorb the juice of raspberries, for instance, and thus spoil them for the table; they also visit in crowds the vats of the cider and wine maker. The naturalists just named, highly and deservedly as they are celebrated, are not borne out in their opinions either by my own experiments, or by those of apiarian correspondents. We have each tried supplying bees with syrup of sugar as a resource for winter, without finding any material change in it after it was stored. It might be clearer, but no other difference whatever was perceptible.

"Reaumur has likewise remarked that *in each honey-cell there is a cream-like layer or covering of a thicker consistence than the honey itself*, which apparently serves to retain the more liquid collections that are from time to time introduced under it. Messrs. Kirby and Spence say, that if honey were the unaltered nectar of flowers, it would be difficult to conceive how this cream could be collected in proper proportions. This observation is made in consequence of their presuming that some of this cream-like covering is conveyed into the cells with each deposition of fresh honey; and it has been supposed that this cream was the last portion disgorged. According to an article in Rees's Cyclopedia, probably written by Mr. Polhill, this cream-like matter is formed at the very first and every addition of honey is deposited beneath it. The bee, entering into the cell as deeply as possible, puts forward its anterior pair of legs, and with them pierces a hole through the crust or cream; while this hole is kept open by the feet, the bee disgorges the honey in drops from its mouth; these passing into the hole, mix with the mass beyond; the bee, before it flies off, new-models the crust, and closes up the hole. This mode of proceeding is regularly adopted by every bee that contributes to the general store." [See Bevan on the Honey Bee, pp. 263, 264.]

The same author speaks in another place in reference to pollen and its use by the bees. He says—

"This substance was once erroneously supposed to be the prime constituent of wax; but the experiments of Hunter and Huber have proved that wax is a secretion from the bodies of wax-working bees, and that the principal purpose for which they collect pollen is to nourish the embryo bees. Huber was the first to suggest this idea, and it well accords with what we observe among other parts of the animal kingdom;—birds, for instance, feed their young with different food from what they take themselves. Mr. Hunter examined the stomachs of the maggot bees, and found farina in all, but not a particle of honey in any of them. Huber considers the pollen as undergoing a peculiar elaboration in the stomachs of the bees, to be fitted for the nutriment of the larvæ."

HUISH, a close, and in general, accurate observer, describes honey as—"a gummy, saccharine, fermentative juice, one of the immediate principles of vegetables, and which has received a particular elaboration in the stomach of the bees. It is in this laboratory that it assumes that viscidity and consistency, which it did not possess in its natural state, and also that peculiarity of fragrance and taste by which it is so essentially distinguished." * * * "The question has been long disputed amongst naturalists, regarding the elaboration which honey undergoes in the stomach of the bee; and whilst some maintain that it undergoes a decided alteration, others affirm that it is deposited by them in the cells in the same state that it is extracted from the flowers. The latter hypothesis, is however, in a great degree invalidated by the circumstance, that the flavor and taste of the saccharine juice in the nectarium of the flowers are decidedly different, as may be ascertained by sucking the pips of the cowslip, and those of the white or red clover; whereas, when these same juices are deposited in the cells of the bee, they have acquired one uniform taste and fragrance, which they did not possess in their natural state, as well as a viscidity and consistency which could only have been obtained by some unknown elaboratory process. Were the honey, when deposited in the cell, to be of that thin and fluid nature in which it appears in the nectarium of the flower, it would flow out of the cell; at the same time it must be admitted, that the elaboratory powers of the stomach of the bee must be wonderfully great to change the nature of a natural production in so short a time as that which intervenes between the extraction of the mellifluous juices and their deposition in the cells." [Huish's work on bees, pp. 369, 375.]

The ideas of this writer in regard to pollen seem to be so different from any we have met with, that we cannot at present assent to them; yet we deem it proper to give them for the examination of our readers.

"It has," he says, "been asserted by some apiarians, that bee-bread, or the pollen of flowers, is the food which is administered to the young; but so far from this substance being gathered as the food of the larvæ, we can affirm that under no circumstances whatever, is it applied to that purpose, nor does it under any modification whatever, form a part of the food of the bees. Honey is their only natural food, and although they possess the power of regurgitation, yet we never experienced a single instance in which honey was regurgitated into a cell in which there was an existing worm. Rather than consume a single particle of bee-bread they will die with hunger." [pp. 344, 345.]

CATCHING RATS.

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GOVERNMENTS have offered bounties for the destruction of bears, wolves, and foxes, while the rat, the most injurious to the interests of man of all quadrupeds, is allowed to pursue his marauding career entirely independent of legislation.

It is not a very easy matter to extirpate rats; they are endowed with more sagacity than they generally have credit for, and under the promptings of self-preservation, often elude plans which are laid for their capture. A friend of the writer, quite distinguished as a successful hunter, has frequently been heard to make the remark, that he could catch a fox easier than he could catch a common house-rat.

A writer in the Ayrshire (Scotland) *Agriculturist*, appears to understand the business of rat-trapping, and gives some directions on the subject which we think worthy of remembering. He recommends the round and square wire traps; and in order to take the rats, he states that "it is in the first place necessary to remove their suspicions, to get the better of their cunning; in short, *to throw them off their guard*." He thinks this can be most effectually done by "*fastening the doors* of the trap *open* for a night or two, so that the rats may have free ingress and egress." He supposes that rats, as well as many other animals, possess the power of conveying intelligence to each other; and when one has found a delicious morsel, he will convey the intelligence to his comrades. As bait, he prefers bacon, fried till it is somewhat burned, with plenty of grease. He recommends that the trap be visited early in the morning, for if the rats remain long in the traps it will be the means of frightening the others so that it will be difficult to catch them.

"*Poison*," he says, "can only be resorted to in such places as are inaccessible to any other living animal. It can safely be applied in sewers, drains, and such like places, and should always be combined with some savory fry. In this instance, again, *feed* for a night or two ere mingling the poison in the food—you will thus lull suspicion and commit greater havoc. I may here observe that common bottle corks, cut in very thin slices, will kill rats, and will be greedily devoured. *Phosphorus* has been recommended, and so has broken glass. For my own part, I detest poisoning, and prefer the trapping system. Either when using trap or poison, you will find your success immeasureably enhanced by using a few drops of the following mixture upon the mess used as bait. It is the preparation generally employed by professional rat catchers, and is that to which they have imputed such wonderful effects—such as decoying the vermin into one spot, and there destroying them wholesale. I must, however, confess that I have both sought and met with some of the most talented and successful professors of the art of rat-catching, without witnessing such miracles. I once, however, did *see* a tame rat, (in Edinburgh, at the back of the Catsle, in the year 1837,) which, having been previously smeared with a certain composition—that which I am about to describe—was let loose in a vault, and in less than half an hour returned followed by some half-dozen others, which seemed so enamored of the decoy, or of the scent that hung about him, that they suffered themselves to be taken alive in the rat-catcher's hands, without ever offering to bite. The preparation I purchased from an eminent practitioner in rat-catching. It is as follows:

Powdered Assafœtida,.............	¼ grain.
Essential Oil of Rhodium,.........	3 drachms.
Essential Oil of Lavender, ...	1 scruple.
Oil of Anniseed, ...	1 drachm."

BREEDING STOCK.

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THE *New-York Farmer and Mechanic*, speaking of the stock exhibited at the late Fair of the American Institute, makes the following statement:—

"We will here take occasion to remark, what all will acknowledge, who carefully examine for themselves, that our best stock is produced by crossing the breeds. No matter how good at first, experience shows that they can be made better; and it is a law of nature that all things degenerate by a continued growing from the same seed or blood."

The writer of the above quotation may have seen enough to induce *his* belief "that all things degenerate by a continued growing from the same seed or blood;" but for ourselves, we have not so learned the operations of nature. That it is possible, under some circumstances, to improve both animals and vegetables by cross-breeding, we do not deny, but a *latitude* is here given to the practice, which might be productive of great injury. According to this writer, "*no matter how good* at first," animals may be, "experience shows that they can be made better" by crossing! It strikes us that the proposition involves a palpable inconsistency, for if it is "no matter how good" our stock may be "at first," we would take such as are *perfect*; and we should like to know how perfection can be improved?

But we find these distinct races and breeds existing naturally; and, if, in the beginning, they so well answered the designs for which they were created, as to be justly pronounced "very good," it seems to us that the doctrine which would break down these lines, should be received as too much akin to that which would cause the oak to produce the pumpkin. It would throw the fairest works of nature into confusion; it would unite the Caucasian with the African or the Mongolian, and their progeny with the aboriginal American: it would lead us to sacrifice the fine fleece of the Merino sheep for the sake of intermingling the blood of the coarser races: it would lead us to destroy all the distinct and beautiful breeds of horses and cattle, by mixing them together; and, in fact, throughout the animal and vegetable kingdoms, would leave nothing but hybrids and mongrels.

As to plants or vegetables, we know the idea is entertained—though erroneously, as we think—that all varieties "run out" if propagated continually from the "same seed;" and this leads to the notion of a necessity of change. A farmer obtains a variety of wheat, or some other grain, which proves to be better suited to his soil than any other; but he can only keep it a few years before he concludes that it "has been raised on his farm long enough," and he changes it for some other kind.

Now we admit that with the careless and slovenly husbandry which too many practice, this 'running out' actually takes place; they get good seed, but allow it to degenerate and become adulterated by their bad management. Their land is not properly tilled; their crops are light; their grain is mixed with seeds of pernicious plants; and this spurious product is sown year after year without any attempt to improve it. What but degeneracy could be expected?

We believe the grand principle of improvement, both in plants and animals, is SELECTION. Always choose the best for propagation, and improvement may be advanced to the highest practicable point.

THE BARBERRY.

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MR. EDITOR—In the October number of the Cultivator, is a communication from Mr. Barnes, in which he inquires if the barberry will blight wheat and rye; and thinking the following may assist in coming to a correct conclusion, I submit it for consideration.

On my father's farm, is a lot on the south-west side of which are two large barberry-bushes, standing near each other, and the only ones in the neighborhood. This lot has been repeatedly sown with rye, and no deleterious effect perceived from the barberries;—in fact, we thought they would not blight;—but in the fall of 1837, this field was again sown to rye, and the next summer the effect of the barberries was too apparent to be mistaken even by the most casual observer.

A piece of about two or three rods in width, and extending into the field eight or ten rods, in a north-eastern direction from the bushes was totally blasted—the straw black, and falling down with no grain at all; while on either side and beyond, the rye was good and well-filled. This blight extended over about one-fourth of an acre; some part of it, but partial, was traced directly to the barberries; because on the side next to them, the blight extended to the outside of the field, while on the opposite side, the rye was perfectly good; and no blight was perceived in any part but adjoining these bushes. It was noticed at the time by many persons, who can be referred to for the truth of the above statement.

Now this we consider proof postive that the barberry will blast rye, although your opinion, (always entitled to great weight,) is so decided to the contrary; for we can account for it in no other way.

Is not this the true cause of the blight?—that the barberry and the rye were in blossom at the same time, and the pollen of the barberry was blown by the wind on the open blossom of the rye, thus causing blight? If this be so, the one must be in a proper state to give, and the other to receive the blight at the same time, which would be very short, and might *not often occur;* and will not this explain the reason why it does not every year produce the blight, or more frequently than it does. Besides, it might require the weather to be damp; but, evidently, the wind had an effect, for, if it had blown harder it would have carried the blight further; and if it had been in a contrary direction, or had not blown at all, it is probable no effect would have been produced.

Now in the statement of Mr. Hecox, vol. VII., p. 175 of the Cultivator, did the bush which he set in the middle of his field—and which to him so conclusively proved that the barberry will in no case blight—produce any blossoms? I should think from its being transplanted it would not, and this might be the reason that it had no effect. But this one case, or the three cited by you, no more proves that the barberry will in no case blight, than the escape of a *few* persons from a prevalent disease would that it was not contagious.

Mr. Barnes says, the person of whom he procured his bush had three large ones standing on his farm for 20 years without any influence whatever on his wheat; but he does not say that he has sown wheat in their immediate vicinity—perhaps he has not within a mile of them!

That one bush will blight an entire field of many acres is absurd; but we, although not given to belief in the marvelous—or *that wheat is chess and chess is wheat*—still are satisfied that in some cases the Barberry will blight rye—for facts *are* stubborn things, and cannot be easily overthrown by philosophical theories or chemical experiments. J. G. CLARKE, Jr.

Kingston, R. I., October 29, 1846.

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REMARKS.—We differ altogether with the writer of the above communication, in regard to the tendency of his "facts." The first and main point which he wishes to make out, is, that in 1838, a field of rye was blasted by two barberry bushes; at the same time he admits that "*this lot had been* REPEATEDLY *sown with rye and no deleterious effect perceived from the barberries.*" As soon, however, as a season occurs in which a portion of the grain blasts, it is charged to the bushes!

But he suggests that the exemption of the previous crops from blight, was owing to there having been no *blossoms* on the barberry bushes in those years. In this, we will give him the credit of being the first, to our knowledge, who has attempted an explanation of the supposed deleterious influence of this shrub. But will "facts" support his theory? We feel quite confident they will not, though we would not pronounce rashly. In the instance to which we referred, as having fallen under our own observation, we know the bushes bore fruit, and of course had blossoms, nearly every year.

He says the "three cases" cited by us do not prove that the barberry will in *no* case cause blight. We cited *four* cases, and he throws into the same scale the "fact" of a field having been for several years sown to rye without any ill effect being observable from the barberry-bushes standing near, and yet attempts to prove, by only a *single* case that they will produce injury!

But the principal "fact" in regard to the subject is, that grain sometimes blasts and sometimes does not blast, in the vicinity of barberry bushes and elsewhere. It is difficult to assign causes, in all cases, for this effect, as well as many other phenomena in nature. It is, however, only by an accumulation of "facts" that we can expect to trace effects to their legitimate origin. At present, we think, the *weight* and number of "facts" decidedly against our friend's theory.

CHARCOAL AS MANURE.

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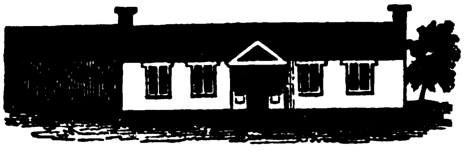
MR. TUCKER—I see in the report of the Commissioner of the Patent Office, notice of some extraordinary results, gained in the wheat crop, by the application of 50 bushels of pulverized charcoal to the acre. Will Mr. Haywood, of Sandusky, Ohio, or some other farmer, who has successfully tried it, inform me through the Cultivator, on what kind of soil the coal should be applied for the best result? Whether moist or dry land, clay, loam, or sandy soil; and if it should be applied invariably in the spring; and if it is known to have a better effect on soil that contains a good portion of lime, or that without lime?

To gain orthodox information I send to the Albany Cultivator, as head quarters. Although the Southern Cultivator is gaining ground rapidly, yet the southern farmers have not thrown off their loose habits of doing things so much at random. They must practice closer observation to learn the best way of making any experiment before they can judge of the cause of failure, or the particular point to be observed, in order to give the most complete success. HENRY M. EARLE.

Earlesville, S. C., Oct. 22, 1846.

P. S.—The sides of our mountains, in this latitude, 35 degrees, 10 minutes, promise good success for the culture of the grape and the manufacture of wine. Is it known what kind of manure will give the best flavor to the grape, and produce the most luxuriant growth?

[We believe it has been decided in Germany that the best manure for vineyards is the leaves and trimmings of the vines, mixed with ashes, and worked into the ground.—ED.]



PLAN OF A COTTAGE.—Fig. 103.

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MR. TUCKER—Having observed in the Cultivator, a request that some one would furnish a plan for a cottage, the rooms all to be on the same floor, I beg to enclose you one which I hope will be agreeable to your correspondent. Having neither cellar nor attic, it would be warm in winter and cool in summer; would be free from the unwholesome vapor arising too often from decaying vegetables in a cellar under a residence; and not only free from cold draughts of air from the attics, but in case of fire would be very easy to escape from—indeed no loss of life could occur. It could be also very cheaply built, there being no expensive carpenter's work, as the ground floor would be the only one, and that might be made of plaster, painted, and covered in winter with carpets, in summer bare. In this way the building might be made nearly fire proof. The walls may be either stone, (in which case they must be lined with wood and plaster,) brick, rough-stone plastered, dried clay, or gravel and lime, or even lath and plaster. All these last to be durable, should be either coated with Hearle's cement, or with a cement made with slacked lime, litharge, and linseed oil—say oil enough to moisten the lime, and an ounce of litharge to a gallon of oil; then mixed with three parts sand and water to a consistency for use; making a perfectly hard, durable cement that resists weather and frost.

For a roof, the plan lately adopted in Upper Canada, I think preferable; namely, simply to cover with dry, narrow, well-seasoned boards, tongued and grooved—the joints from the apex to the eaves. These boards to be afterwards painted with some coarse color—say ochre, and then sanded. This should be repeated after a year; the joints if needful filled up with lime, oil, and sand; and then finished with any color desired; or for economy, the cement called Hearle's; or the composition of lime, oil, and sand, might be applied, to be repeated at the end of a year—as during that time the boards will shrink, however well they may previously have been seasoned.

These roofs are almost as fire proof as slate or metal, and in case of fire do not endanger other buildings as shingles do; they are also cheaper than shingled roofs, and neater.

In finishing the interior—which ought invariably to be plastered, being cheaper, cleaner, and more durable than wood—a mode has been adopted lately in Montreal, in some public buildings, of great service where economy is looked to; namely, coloring the plaster while wet, in a similar manner to that adopted in London, in the new houses of Parliament, and for years back common in Italy—I mean *fresco*. It consists in applying certain durable colors mixed with simple water to the plastered wall before it has time to dry. In this way it becomes incorporated with the plaster, is perfectly durable and can be washed—even if not intended to be the permanent coloring, it causes the wall to look neat until dry enough for painting or papering. The following colors answer perfectly and never fade:

Blue black—grey, in shades.

Blue vitriol—blue—is decomposed by the lime, and forms this color.

Powder blue—or smalts—this is used for linen occasionally—it is finely powdered glass.

Blue verditer—blue.

N. B. Prussian blue, damp blue, blue ochre and all such, fade at once.

Mineral green—green.

Blue verditer and chrome yellow—green.

N. B. No other greens can be used except chrome oxide, which is too dear.

Yellow ochre—yellow.

Green vitriol—yellow—this is decomposed by the lime, and a yellow is the result.

Chrome yellow—must be used with care, or scarlet specks will be formed.

Red ochre, Venetian red, } various shades, all dura-
Indian red, purple brown, } ble.

Vermillion—answers well, and gives the most beautiful shades—very superior to those with oil.

Vandyke brown, }
Raw umber, } all good.
Burnt umber, }

Of course, vegetable or animal colors are useless.

I have so contrived the building that a green-house can be annexed having no windows opening into it—except those from the parlour. For the cellar and root-house, I propose one be constructed under the coach-house—the floor to be composed of solid timber and plaster, to keep out the frost—and that an ice-house, with a dairy and pantry over it, be built in another part of the yard. A stable, with manure pit beneath, and hay loft over, being constructed at some little distance, for fear of fire.

I now refer to the plan herewith:

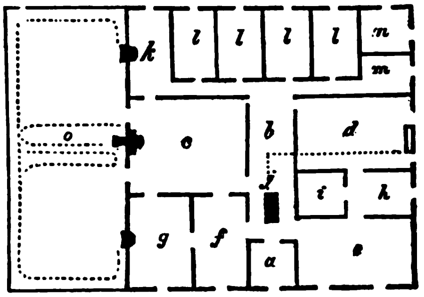

Fig. 104

a, outer hall,	10 feet by 10,	10 feet high;
b, inner hall,	33 feet by 10,	12 “ “
c, drawing-room,	24 feet by 19,	14 “ “
d, kitchen,	24 feet by 14,	14 “ “
e, dining-room,	24 feet by 14,	10 “ “
f, library,	12 feet by 19,	10 “ “
g, best bed-room,	12 feet by 19,	10 “ “
h, pantry,	10 feet by 14,	14 “ “
i, store closet,	10 feet by 10,	10 “ “
k, nursery,	10 feet by 19,	10 “ “
l, four bed-rooms,*	9½ feet by 16,	10 “ “
m, servant's room,	10 feet by 10,	10 “ “
n, man's room,	10 feet by 9,	10 “ “
o, green-house,	50 feet by 25,	18 “ in centre.

I have given an elevation to exhibit, the general appearance, and also add a section to show how the extra

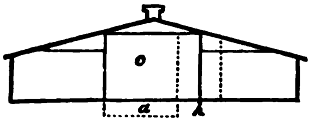

Fig. 105.

height of the parlor and kitchen is got out of the rise in the roof. This height is a great improvement in appearance, adds to the comfort of the resident, and is required to make the proportions correct. The nursery and servants' bed-room windows, should open down to the floor, as should those in the parlor, kitchen, and pantry. The inner hall can have a stove in it, to warm the bed-rooms, and the stoves in the parlor, best bed-room, and nursery, can communicate with flues to warm the green-house. ZEA.

Montreal, 1846.

American wheat, 9¾ bushels, of 60 pounds to the bushel, equal to the English quarter.

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* If these are too small, three of 12 feet each instead of four

POINTS OF CATTLE.

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[The principles of improving the breeds of cattle and other stock, are not generally understood in this country; nor is much knowledge manifested in regard to the *points* by which animals, (especially cattle for fattening,) should be judged; and we have no doubt that a want of information on these matters, operates to lessen the proceeds arising from the rearing of stock, to the amount of twenty to fifty per cent. The following observations refer chiefly to the points which Short-Horn cattle should possess, to fatten to the best advantage, though they are in general equally applicable to other breeds designed for the same purpose. The remarks comprise a portion of an essay on cattle, published by the Royal Agricultural Society. We would call particular attention to what is said in reference to *handling*, a point, which, though it is unquestionably of more importance in cattle designed for slaughter than any other, is probably with us the least understood or regarded.]

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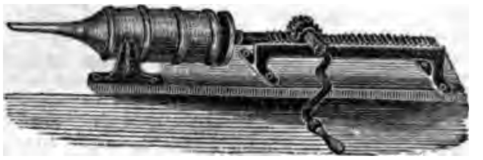
The rump-bone, when the beast is in a lean state, should be about two inches off, and the upper part of it level or even with the under side of the tail. When the rump-bone lies near to the tail, it shows the smallest quantity of fat laid on that part; but the general dislike to this is proved by the name of "Tom Fool's Fat" being given to it. When narrow in this part, there is always a want of substance and lean flesh between that and the hip, and a part between them where the fat of the two points does not join together; whereas when the rump is farther from the tail, the fat is continued from it to the hip. The distance from the hip and rump should be long and full of lean flesh; the hips should be wide, especially those of a female, which should be wider in proportion than those of the male. The shape of the hip is difficult to describe, but should be something like a round-pointed triangle, with one end hanging downwards, and on putting the fingers on to the centre a hollow will be found. The loin should be flat and wide; and when lean, two knobs or pens should be felt, which when fat, will be the base of two ribs, called false ribs, which connect the hip and rib together in mass. The part commonly called "the space" from the hip to the rib, is generally recommended to be short; but still it must be borne in mind that the beef on this part is of more value than any other; and if the loin be flat and wide, and the rib high and round, no ill effects will proceed from a moderate length of space, and it unquestionably gives that length and grandeur to the character of an animal which is very desirable: it is the want of a wide loin and round rib, and not the length of space that causes gut. The rib should come well out of the back, and be broad, round and deep. On putting the fingers and thumb on each side of the rib, and drawing them together, the skin should be thick, pliant, and mellow, and the hand be filled with long soft hair, and the feel underneath should be smooth and pleasant. The sensation derived from a fine touch is delightful to an amateur breeder, but cannot be defined; few things denote a good hardy constitution more than a soft thick skin, full of long hair. Putting the finger and thumb on each side of the rib as above described is called "handling" in the north, but in the midland and southern counties it is generally called "quality." Whether that term had its origin at Smithfield we need not inquire, but certain it is that Mr. Charles Colling knew of no such word as applicable to inclination to fatten. "Quality" is frequently used to denote firmness of flesh, and sometimes it is misapplied, as in hardness of flesh, but seldom used to signify inclination to fatten; the mistake in this particular has done much harm to many herds of Short-Horns. Let handling and quality go together in a fat animal, and a good bred Short-Horn will have waxy beef, under a loose, pliant hide, full of soft, long hair; but in a poor beast, "handling" is the only test to discern the inclination to fatten. Handling is the most important subject we have to consider; it is the grand characteristic of a Short-Horn, [or other beast designed for fattening.] Of what value would an animal be, possessed of perfect symmetry, if he could not be made fat without extraordinary keep? It has been said above, that it was Mr. Charles Colling's fine touch in this particular that enabled him to bring the Ketton Short-Horns to their unrivalled state of excellence; its importance has led me to dwell upon it at some length; but it is impossible to describe the kindly *feel* which is conveyed to the senses by the *handling* of a first rate Short-Horn; yet the knowledge of it is absolutely necessary for a breeder to possess before he can bring his herd to any high state of excellence. The next point under consideration is the crop, in the shape of which, width of the back, and roundness of the rib, but in a less degree, should be continued forward, so as to leave no hollow behind the shoulders. The shoulders on the outside should have a roll of fat from the lower to the upper part of it; the nearer to the top, the more closely it connects the crop and the collar in front of the shoulder together. In the anatomy of the shoulder, modern breeders have made great improvement on the Ketton Short-Horns by correcting the defect in the knuckle or shoulder-point, and by laying the top of the shoulder more snugly into the crop, and thereby filling up the hollow behind it. This is an important improvement, but it may be questioned whether the great attention that has been paid to this has not been attended by the neglect of some other more valuable parts, for we now seldom find those long hind quarters, so peculiar to the Ketton Short-Horns. Shoulders should be rather wide at the top; that is, they should not lie close to nor be quite so high as the withers; for when they are narrow at the top, and too oblique in the shape, they never cover with fat over them properly, and the neck of such animals is often too low. Mr. Mason, of Chilton, whose attention was first drawn to this point, with his wonted skill, succeeded to admiration; the prominent breasts and oblique shoulders of his beasts, on a side view were perfect; but the shoulders were close and narrow at the top, and did not load with fat. The first evidence of this, of notoriety, was in the beautiful cow Gaudy, (whose picture is to be seen in the first volume of the "Herd-book,") who, when slaughtered, was barely covered in this point, although very fat in all other points.

The neck and head are not handling points; but I will briefly notice them before I turn to the lower part of the body. The neck should be thick and tapering towards the head; a thin neck is strong evidence of a want of flesh and substance in other parts. There are various opinions on the shape of the head; some prefer it to be long and lean, whilst others approve of its being thick and short; but to be broad across the eyes, tapering considerably below them to the nostrils, which should be capacious, with a cream or flesh-colored muzzle, will be nearly correct; although it is but right to state that there are many well-bred Short-Horns with dark muzzles. This has been considered by many to be a recent introduction, through some inferior cross; but without denying that, let it not be forgotten that some of the early Short-Horns were not entirely free from it, although not very common; but the sire of Foljambe could not boast of much delicacy there. The horn has often been called a non-essential, and in some respects that may be true; yet it must be admitted that a small, moist, white or yellowish horn, coming well off the head with a graceful circle, and with a downward tendency at the end in a female, and an inclination upwards in an ox, contributes much to the character and appearance of an animal, and denotes a feeding propensity. The eye has had its fashion at different periods: at one time the eye high and outstanding from the head, and at at another time the sleepy eye sunk into the head; but these extremes have merged into the medium of a full, clear, and prominent eye, with a placid look. The neck-vein forms a collar in front of the shoulder, extending from the upper part of it down to the breast end, connecting the fat on the shoulder with the fat on the breast, thereby promoting a uniform covering of fat throughout every part of a beast, commencing at the rump, and proceeding along the back to the hip, loin, rib, crop, shoulder, and breast, without patch, or any one part having excess of fat beyond that of its neighbor. The breast should come prominently out from between the fore legs, and extend down to about two or three inches of the knee-joint, and its width should never be lost sight of. An animal with a *wide back and a wide breast* cannot fail to have substance, fore flanks, wide fore legs, and other indications of a strong and vigorous constitution. The buttock is a part that is not handled as a fat point, but should not pass entirely unnoticed, although in the *best bred* Short-Horns there is little occasion for caution against the black flesh in this part, which some other animals have; but a want of lean flesh is as great an evil as an excess of it; it is necessary, therefore, that there should be great fulness nearly as low as opposite the flank, tapering from thence to the hock; this fulness should be on the inside as well as the outside of the thigh, and give a full twist, lining the division between the hams with a continuous roll of fat to the next point under the belly.

Hitherto my observations have been confined to feeding propensities only, without any regard to the dairy. It is notorious, and much to their detriment, that many of the most superior Short-Horns do not possess that quality in an eminent degree. The annual loss to the breeder on each cow is very considerable, when we see that of two cows consuming an equal quantity of food, one gives six gallons of milk per day, and the other gives two only, this loss of milk will require much gain in beef to compensate for it. Cows for the dairy require to be of the same shape, and possessed of the same feeding propensities as have been attempted to be described above, with the addition of a well-shaped udder. When in full milk, the udder should be capacious and flesh-colored, with paps standing square and at a distance from each other, the hind part to appear as if it proceeded from the twist; and it is the fore paps that give the most milk; the milk veins under the belly should be large and full. There is no test to determine beforehand whether a cow will give good milk or bad, but it is at all times very essential to rear bulls out of cows that are descended from a tribe of good milkers.

Having given a general outline of all the points of a good Short-Horn, there is still the outward contour and character deserving of notice. On viewing an animal all the points described above are brought to our sight at once, and we can almost determine upon their merits at sight, without the more unerring test of the fingers. The placid looks, the graceful head, neck, and horns, the straight top, the prominent breast, the snug laid shoulders, the wide back and hips, the round ribs, the fine long quarters, the flowing silvery hair, the clean limbs, and great substance—all present themselves simultaneously, and give an impression that language cannot define. An artist, on looking at a painting, can instantly discern whether it is a highly-finished picture; but if called upon to describe its merits, he would, I presume, be at a loss for language to convey his feelings and judgment to an inexperienced person; and there is the same high finish in a good Short-Horn, attended with the same difficulty of explanation. Experience is universally allowed to be the best teacher; though, if we are left to our own experience alone, it will require a lifetime of no short duration to become a proficient.

FORCE OF PREJUDICE.—An English paper rather singularly explains the prejudice which the people of that country entertain against the use of Indian corn:—"An Englishman cannot reconcile himself to the idea of eating the boasted Indian corn, though cooked in all the multiform modes of a Yankee *cuisinier*. He feels in himself the dignity of civilization, and when eating his dish of maize he assimilates to himself the idea of the back woods of America, the desolate chaos surrounding him, and the monotony of life of the back settlers."



SAUSAGE STUFFER.—Fig. 106.

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IN the families of large farmers, the making of sausages is quite an important item of "domestic industry." In former days, when sausages were filled by stretching the membrane over a small hoop, stuffing in the meat with the fingers, it was a slow and tedious business. A great improvement on this primitive mode, was the use of the tin tube, now common, by which a great saving of time, labor, and *patience* is effected. But where a large quantity of meat is annually to be worked up, the use of a machine, like that above delineated, will be found the most economical in the long run. The filling is performed with great expedition—one person accomplishing as much with the machine, as ten persons could effect in the same time by the ordinary mode. The cost of the machine, we believe, varies from $3 to $5, according to size.

SUPPOSED EFFECTS OF LIGHTNING.

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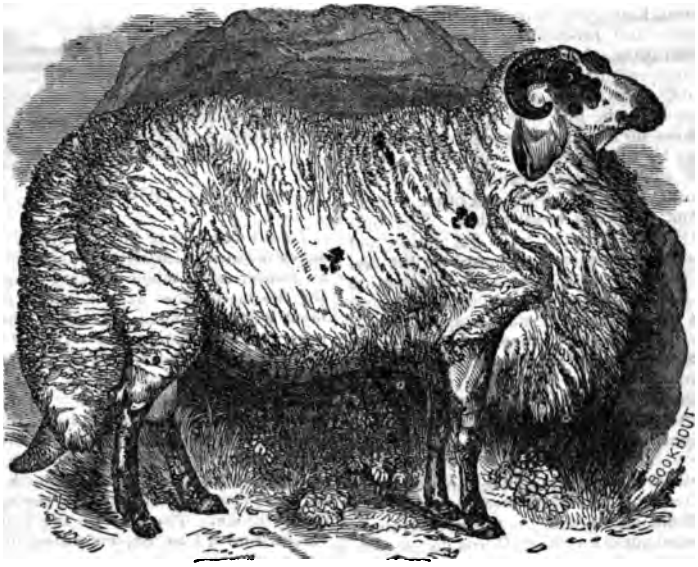
ON the downs and heaths of some parts of Great Britain, the vegetation sometimes presents certain singular appearances, commonly known as "*fairy rings*." They are circles varying in circumference, in which the grass and other plants are much more verdant than on the adjacent ground. We believe the same phenomenon has been sometimes noticed in this country. These circles have been accounted for by various theories, no one of which, it is said, is sufficient to embrace all the facts. They have been often attributed to the springing up of fungi, which it is supposed spread in a circular manner, and enriching the earth by their growth, give unusual luxuriance to other vegetation.

In connection with this subject, and in reference to some accounts which have been published of the supposed effects of electricity on plants, a writer in the London *Gardener's Chronicle*, with the signature of "D. S. E., of Lambeth," relates the following circumstance. He and his companions were travelling in Portugal, when, says he—"we were overtaken on our road by one of those tremendous thunder-storms incident to hot climates, and which bear no comparison to the slight movements of the elements in our colder atmosphere. Whilst taking shelter from the fury of the storm, the forked lightning struck several objects not far from us. Soon afterwards, I observed several rings of smoke or gas, floating slowly in the air, which preserving their circular form, enlarging or diminishing alternately, until they ultimately settled in that form on the sward before us. In a day or two afterwards, on passing the same spot, I observed on the sward several rings, densely green, two or three inches wide, the grass of which rings had grown full an inch in that short time, and fungi were beginning to make their appearance. There must have been some very highly fertilizing property in the gas. In this country I have always observed that these rings make their appearance after thunder-storms; and I never yet met with a better solution of the phenomenon than that which accident afforded me, as above related."

HINTS ABOUT FOOD.—Roast meat contains nearly double the nourishment of boiled, but boiled meat is better adapted to weak digestion. Frying is one of the very worst methods of dressing food, as broiling is one of the best. Baked meat has a strong flavor, is deprived of some of its nutritious qualities, and is difficult of digestion. Spices, sauces, and melted butter, should never be used by an invalid.



FAT-TAILED SHEEP.—Fig. 107.

On page 88 of the current volume, we gave a cut of a variety of the fat-rumped sheep, which are found in various parts of Asia and Africa. In some parts of those countries, there are found, also, several breeds commonly known as *fat, or broad-tailed* sheep. They bear more or less resemblance to the fat-rumped, and some of them may be considered as having been originally derived from that variety; the variation having at first been only accidental, perhaps, and perpetuated by accident or design. There is considerable variation in the position and quantity of this singular fatty substance. Mr. Youatt, [treatise on sheep, pp. 113, 114,] observes:—"In some, as in the sheep of Syria, it accumulates about the upper part of the tail. Others have too large lobes of fat at the sides of the tail, reaching as low as the hocks. In a third variety, the masses of fat not only extend to, but chiefly occupy the inferior part of the tail, which is naked, and almost flesh-colored. Sheep of one or the other of these varieties, extend over Syria, Egypt, Southern Africa, Russia, India, and China."

The proportion which the weight of the tail in some of these sheep bears to the whole carcass, is quite remarkable. The usual dressed weight of the sheep, is from 50 to 60 lbs., of which the tail is said to make 15 or 16 lbs. Some of the largest sheep, which have been fattened with great care, are said to weigh 150 lbs., the tail making one-third of the whole weight. The tail is described as being composed of a substance between marrow and fat, serving very often, in the countries to which the animal belongs, instead of butter, and is used as an ingredient in various dishes. While the animal is young it is deemed to be little inferior to marrow.

Mr. Youatt gives an extract from Russell's History of Aleppo, in which it is stated that the sheep of the largest size are "kept up in yards, so as to be in little danger of hurting their tails as they walk about; but in the fields, in order to prevent injury from the bushes, the shepherds in several places of Syria, fix a thin piece of board to the under part, which is not like the rest, covered with wool, and to this board are sometimes added small wheels; whence, with a little exaggeration, we have the story of the oriental sheep being under the necessity of having carts to carry their tails. But the necessity of carriages for the tails of the African sheep, mentioned by Herodotus, Rudolphus and others, is real. The tail of that animal, when fat, actually trails, not being tucked up like those of the Syrian sheep."

The above cut was originally taken from a ram belonging to the *Jardin des Plantes*, in Paris. Sheep of this, or a similar variety, have been at various times imported to different parts of the United States. Stock produced by a cross of them with the common sheep, mature early, and are thought to have an increased tendency to fatten. This cross-bred stock was in considerable repute near Philadelphia, some years since, as early lambs for market. We have been told, however, that they are not as much esteemed at a more mature age, or for *mutton*. Butchers have objected that their fat is too much on the posterior part of the carcass, leaving the kidneys and other parts nearly destitute of any.

LARGE AND SMALL ANIMALS.

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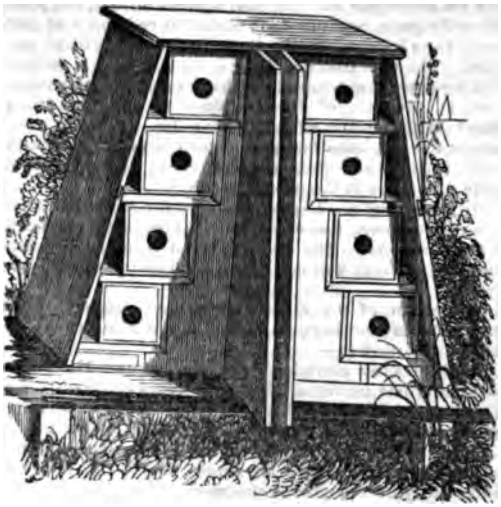
The opinion that animals of the same species consume food always in proportion to their weight, we believe to be an injurious error; we say *injurious*, because we think it operates as a barrier to improvement in many cases. We find some good remarks on this point in an essay on cattle, published in the Journal of the Royal Agricultural Society. The writer says—

"That animals do not increase in weight in exact proportion to the food they consume, has been frequently proved. The writer had at the same period, three cows recently calved, which for convenience of milking, were all kept in the same cow-house; they were fed with straw and as many turneps as they could eat; the average weight through the year was 80 stones, (1,120 lbs.,) 70 stones, (980 lbs.,) and 60 stones, (840 lbs.) The 80 stones cow and the 70 stones cow gave an equal quantity of milk; but that of the large cow was of better quality; the 60 stones cow gave more milk and of better quality than either of the two larger cows; the 80 stones cow and the 60 stones cow consumed an equal quantity of turneps; but the 70 stones cow *ate one-fourth more than either of the others.* The 80 stones cow was a fine animal, with great inclination to fatten."

Humbug.—A paragraph is going the "rounds" stating that there has been a "*new* kind of corn from the Rocky Mountains," grown near Albany the past season. A wonderful singularity about it is, that "each kernel is enveloped in a husk!" We suppose some one started this account of the *strange* production who did not know that it had been grown in various parts of the country for twenty years.



COLTON'S BEE-HIVE.—Fig. 108.

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The above cut gives a view of Colton's bee-hive which received the first premium of the N. Y. State Agricultural Society, at the Auburn meeting. In relation to the hive, the committee under whose examination it came, remark that they think it combines more advantages than any other with which they are acquainted; and they add—"the simplicity of its construction, the pyramidal form of the main chamber for the bees, and the side application of the drawers for the purpose of obtaining honey, warrant us in fully recommending it to the public."

The principal advantages of this hive, as set forth by the patentee, are as follows:

That from its superior convenience and adaptation to the habits of bees, they will accumulate honey more rapidly in it than on any other plan: that from the drawers being arranged on each side of the centre of the hive, (as shown in the cut,) the bees will fill from four to six of these drawers in the same time that they will fill two placed in the ordinary way, over the top: that the bees more readily enter the drawers on the sides without disturbing others, than when they are placed over the top: that the horizontal entrances to the drawers, (two in each, 4 inches long and 1¼ inch wide,) are much better than auger holes on the top: that the bees will attach their comb, which is usually 1¼ inch thick, to the shoulder, (which including the opening into the drawer, is 1¾ inch wide,) and consequently run one-half the comb up through the drawer, still leaving a quarter of an inch for ingress and egress: that the double covering, which by this hive, the bees are allowed, is warmer in winter and cooler in summer: that to remove the brood comb of an old hive, by breaking out one half in one year and the other half the next year, is better than any dividing of the hive, or driving-out process.

Our cut represents the front of the hive with the doors or shutters opened, showing the arrangement of the drawers, each having a piece of glass in the end, through which it may be seen when they are filled. We have never had an opportunity to examine this hive, but from the representations of experienced bee-keepers, and the plan of its construction, we have formed a favorable opinion of it. The name of the patentee is Aaron Colton, and his residence is Pittsfield, Vermont.

Swarming of Bees.—When bees swarm, they generally settle at first on some object near the hive, and if care is not taken to hive them while in this situation, they are likely to go off to the woods—sometimes to a great distance. Their flight is always direct, and sometimes astonishingly rapid, and when once they are fairly started, it is almost impossible to stop them. Various expedients have been tried for this purpose, and generally with but little effect; such as making great noises with old pans, bells, firing guns, &c. But we lately received from Mr. Sleight, of Geneseo, Ill., an account of a very simple means of arresting their flight, which he assures us he has proved to be perfectly effectual. It is to reflect the sun's rays directly upon them from a looking-glass. He relates several instances where swarms which were on the wing, endeavoring to make their escape, were suddenly stopped and made to alight in situations from which they were hived, by sending a few quick and vivid flashes of light from the glass directly into their centre. They appear to be greatly frightened or annoyed by this lightning-like appearance, and however rapid may be their flight, they will, it is said, at once come to a halt.

BENSON'S HYDRAULIC RAM.

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Mr. Tucker—We have lately been invited by Mr. Luther Griffin to witness the operation of one of these machines for raising water, set up by Mr. G. in this town for public inspection. The location of the machine was near a spring issuing from the base of a high bank, extending for considerable distance parallel with the stream produced by the spring, and near the summit of which was situated the farm-buildings of the occupant. Some six or seven rods below the fountain head, a small dam was built in order to give the fall necessary for the action of the machine, and some three or four rods lower down was the machine itself, so that the distance from the apparatus to the top of the bank was considerably greater than it was from the fountain. From this location we saw the water running up this steep bank, a distance of perhaps fifteen rods, in quantity sufficient to answer all the purposes of a large farm-yard and the house. But the water did not stop long in its aspiring course to subserve these purposes, for, by a continuous pipe, it passed, first, through the top of a high apple tree, (then bountifully laden with noble fruit,) from which, with the sprightliness of a squirrel for aught we know, (it "kept dark" in the pipe so that we could not see its motions,) it passed to the roof of a cow-house, which it traversed for 30 or 40 feet, when it became more aspiring and sought the roof of the barn, and after having reached the ridge of this, perhaps for the want of something higher to climb after, it passed itself down on the other side, at a height of seventy feet or more above its fountain; while the little toy pond that fed the saucy fellow that sent it up so high, exhibited a surface as serene and beautiful as though no dream of aiding or abetting in such roguish mischief had ever entered its bosom.

This illustration of the power so small in its compass, and so simple in its fixtures and operation, as you may well suppose, altogether exceeded our expectations, and were it not an age when the most wonderful things very often become the most probable, we should have doubted much whether such a performance could have been exhibited. But we saw the feat, and so did many others, so that if our own senses are to be credited, we must believe.

The construction of the power is very simple, and in our view not likely to become deranged or get out of repair in any of its parts, or more frequently than would be the case with any ordinary aqueduct. If in process of years the valve and the spring that regulates it should become "worse for wear," as they necessarily must, any common mechanic can replace them with the greatest ease.

The advantages of this machinery will doubtless be realized for many practical purposes. In places where buildings are situated on elevations, they will be found convenient for raising water from lower lands where the benefits of ordinary aqueducts cannot be realized. At large manufacturing establishments they may be employed to elevate and carry water from the main stream to reservoirs in any part of the premises, to provide against damage in case of fire. They may also be made useful for filling tanks to water gardens, where the stream is lower than the garden.

They are so constructed, that where the fountain from which water is to be taken is not sufficiently large to answer the purposes for which it is conveyed, and at the same time become the propelling power to move itself, the machinery may be moved by water from another fountain or stream; as for instance, a spring of soft water breaks out from a bank, near which a stream of hard water passes. The hard water can be made to drive the machine while it carries the soft water to the desired point, or vice versa.

W. Bacon.

Richmond, 1846.

RECLAIMED LANDS.

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In the Boston *Courier* we find the statements of some of the competitors for the premiums offered by the Middlesex (Mass.,) Agricultural Society on reclaimed bog.

Daniel Shuttuck, of Concord, has a tract of land containing twenty acres, which eight years ago was overrun with hard-hack, whortleberry bushes, alders, brakes, &c. It was first drained of the stagnant water; the alders and other bushes were next cut and burnt on the ground. It was then broken up as well as it could be, but the surface soil was so matted together by roots, that the plow would sometimes take up pieces of ten by twenty feet in extent. After the stirred surface became dried, it was burned or *charred*, the process of which is given as follows:

"First gather a few sods, quite dry, and set fire to them, and then pile on successive layers, keeping the fire from breaking out, as in burning charcoal. In this way, without any additional fuel, a large heap of excellent compost may be produced, while the roots and seeds of noxious weeds and bushes are entirely destroyed."

The ashes thus produced were spread on the land, potatoes or corn planted one or two years, and then laid in grass with a crop of oats or barley, the ground having been previously levelled as well as possible. It has produced from a ton to two and a half tons of good hay to the acre, since it was seeded down. It does not appear that the land has been manured, except that he has used on it guano and salt. The former, he says, does well, though he believes "the compost-heap will never go out of fashion." As to the use of salt, he says he "saw no good reason to repeat the experiment."

In concluding his statement, Mr. S. observes—"Some may be disposed to ask, 'is farming in this way profitable?' I answer, yes." He admits that to bring this land to its present condition, "required some courage, with a due proportion of faith and hope," but he says the value of the land has increased four-fold, and will alone pay for all the labor bestowed.

J. B. Farmer, of Concord, was another claimant for the premium on bog-meadows. His land was formerly occupied, he says, with "water-grass, or cotton-head, water-brush, and blue-vengeance, [what's that?] the value of which would very little, if anything more than pay for cutting." The soil is described as a fine black mud, of a crumbly nature, varying from fifteen inches to fifteen feet in depth."

He began by digging a ditch through the lowest part of the meadow, and another near the hard land, emptying into the main ditch. He has tried various modes of preparing such land for the cultivated grasses, and prefers the following:

"I plow any time, (as is convenient) after haying, until the ground freezes; after the ground is frozen, I cart on gravel, sand, or loam, as may be, to the depth of wo and one-half inches, spread and let it remain, until the frost is out to the depth of about four inches, (there still being frost enough left in the ground to bear up my team,) then harrow it until the mud and gravel are well mixed, then let it remain until July; then sow on about one and one-half bushels of oats, one peck of herd's grass, and one-half bushel of red-top seed per acre; then harrow or rake them in, as the ground admits. The oats I let stand until they are ripe which will be about September. I have manured with compost, at the rate of twelve loads to the acre, soon after taking the oats off, and I have let it remain until late in the fall, then manured; and I have let it remain until spring, and then manured; but there was but little difference in the crop of grass."

He states that the hay on this land the next year after it was laid down, was estimated at three tons per acre, at the first crop. The whole cost of plowing, graveling, and sowing, was not far from twenty dollars per acre.

The editor of the *Courier* gives an abstract of the statement of another claimant, E. Wetherbee, of Acton, as follows:—

"His meadow contains about six acres. He began his operations for reclaiming three years ago last spring. The bottom was too soft and miry to admit of driving on a team. It was not worth more than five dollars an acre. Adjoining it, on the westerly side, was a large sand bank, which gave an ample supply of material with which to commence the work of reclaiming. He began by carrying on the sand with wheel-barrows, till the surface would enable him to drive on a team. The whole was covered with sand from four to six inches in depth. A covering of compost manure was then spread over it. In the spring it was sown with herd's grass and red top. The quantity of hay produced the present year was three tons to an acre—herd's grass, [timothy,] red-top, and clover. The hay is worth ten dollars a ton—consequently the product is thirty dollars an acre, on land, which three years ago, would not have brought more than five or six dollars, if offered for sale. The whole expense of reclaiming was about twenty-five dollars an acre."

ADDRESS

Before the Berkshire Co. (Mass.) Ag. Society, on its thirty-sixth anniversary, by John S. Gould, Esq.

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We find a copy of this spirited and well-written address in the *Columbia Republican*. The object of the author appears to have been to show the great advantages to be derived from an enlightened and systematized course of husbandry—the importance of *exactness* in all calculations, and the necessity of determining the products of the farm, as far as possible, by weight and measure, instead of being disposed of by *guessing*.

A great barrier to improvement in agriculture, the author of this address believes to be the prevalence of an idea among a portion of the farmers, that they have "nothing to learn." "Nothing," he says, "can be more disastrous to the cause of agricultural science than the prevalence of this stupefying idea. Never will agriculture assume her legitimate rank among her sister sciences, until the narcotic influence of this mental incubus is totally banished from the minds of the farmers of our country.

"It is true that many have assumed to teach agricultural science who were incompetent to the task which they have undertaken, many ponderous treatises have been written filled with words of 'learned length and thundering sound' which only 'lead to bewilder, and dazzle to blind,' while others, more intelligible to the great body of farmers, have been merely the results of experience derived from one geological formation, and one climate, which proves totally useless, when these important elements of vegetable nutrition are altered. The first class of works which treat of these abstract sciences from which the rules of practical agriculture must be deduced, are too technical for the comprehension of the ordinary farmer, or if he comprehends them they are useless to him because they fail to point out the relations and applications of the scientific laws which they develope to the practical objects of agriculture. A man may be able to state the doctrine of gravitation in the clearest manner, without perceiving its application to the formation of a tear, or the flow of a river, or he may comprehend the law of capillary attraction as it exists in a glass tube, without perceiving its relation to the ascent of the sap in the minute vessels of a vegetable.

“ Works of the second class fail to be useful because they leave out of view the general *principles* on which successful practices are based, and therefore can lead to nothing but disappointment when any one of the conditions are omitted on which these practices depend.

“ But it by no means follows, that because the true laws of agricultural science have never yet been fully developed, that they are incapable of being understood. Thunder and lightning are phenomena which were familiar to the ‘world's grey fathers,’ as well as to ourselves, but the innumerable company of gifted intellects who during all intermediate times have observed them with wonder and awe, were incapable of penetrating the mystery which shrouded their production until Franklin pierced the veil, nor was their adaptation to the rapid transmission of intelligence suspected, until Morse pointed out the mode.

“ The rays of light were as well adapted to painting the images of those objects from which they reflected at the time when the morning stars first sang together as they have been since, but it was reserved for the present generation to avail themselves of this curious property.

“ The heavenly host have been the objects of the most intense contemplation by the most gifted minds for ages, yet no clue to their mysteries, no solution of their anomalies was attained till the days of Newton and Laplace. Encouraged by these and other similar examples, let us hope that there is yet a ‘good time coming,’ when all the dark spots that now obscure the science of agriculture shall be succeeded by a glorious light which will enable us to predict with certainty the result of every process, and finally enable us to attain to the very highest pinnacle of agricultural perfection.”

PLOWING-MATCH.

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[A plowing-match took place in Montgomery, Orange county, on the 28th of October, at which $50, a sum which had been contributed for the occasion, was awarded in premiums. A correspondent who was present at the trial, furnishes us with the following account:]

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The day was fine, and the attendance large. The competitors numbered 16; the ground was very smooth, and in excellent order, and some of the work was most admirably done. Capt. Robinson, of Newburgh, was here with a highly finished plow of Minor & Horton's, No. 22. His team, (horses,) were well trained to the work, and the plowman understood his business. He plowed his land, ¼ acre, in 34 minutes, and in a style that no connoisseur of plowing could find fault with. From beginning until the last, each and every furrow was as straight as a drawn line, and turned handsomely over. Our friend, Capt. R., takes great interest in plowing, and offers to make a large bet at considerable odds, that he can beat any one in the county,—the judges to come from a distance. John Wait held a plow that was got up in beautiful style by Minor & Horton, (No. 21,) for the occasion. The team was horses, a pair of poor, jaded hacks; but the plow was of such light draft that it required but little exertion for the team, and scarcely an effort for Mr. W. to hold it, so level and even did it run. The furrow-slice was not as wide as Capt. R.'s, and was cut and turned with the utmost neatness and precision—not the least shadow of any deviation from a straight line could be perceived. There was a plow from the shop of Speer & Wilson, Newburgh, held by Edward Wait. This plow, but little known, even in this county, made excellent work, and by many spectators was thought to be equal to any in the field. There were some four or five others that made very good work; and all the competitors, I think, plowed their one-fourth acre within the hour.

Everything passed off satisfactorily until the report of the judges was read, when much disapprobation was shown; not so much by the competitors as by the spectators. The judges were selected in the morning, just before the plowing began, and are generally good practical farmers, and well-meaning men; but their views of what constitutes good plowing are sadly at variance with what we have been learning through the columns of the Cultivator, and other works on agriculture. We have been taught that good plowing consists in turning a straight furrow, with great exactness of width and depth, either flat, or slightly lapped. But our friends, the judges, at the grand match, would have us believe this is all wrong; that the right plowing is that which leaves the furrow on the edge, or in as rough a state as possible. They say that this is the best way “to plow for a crop.” Now, if this is so, if the rough, broken furrow is the best plowing, we shall have to discard the so-called improved plows, and return to the old-fashioned “hog-plow;” and as to having plowing-matches, they would be a great farce; for who wants to witness a thing where neither skill nor judgment are called into exercise. SAMUEL WAIT, JR.

Montgomery, Oct. 29, 1846.

ADDRESS

Delivered before the Greene County Agricultural Society, by Hon. ZADOCK PRATT, *President.*

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AT the annual meeting of “The Greene County Agricultural Society,” held at Cairo, it was

RESOLVED, “That the thanks of this Society be presented to the Honorable Z. PRATT, for his excellent and appropriate address, and that the same, be published in the County papers, and in the Cultivator and Farmer's Library.” H. D. H. SNYDER, Sec'y.

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MEMBERS OF THE GREENE CO. AG. ASSOCIATION:

Gentlemen—You have chosen for your president, one who does not boast the graces of eloquence, and you cannot, and do not expect from him, on this occasion, a display of fine words and happy fancies; but rather a plain statement of true and practical ideas. You are working men, and you have chosen a working man, and it is on this account that your choice confers honor upon me. It was in Congress, where my strength has always been given to the protection and advancement of American labor, that I heard of this new evidence of your kindness and confidence; and I thank you for it, and for thus affording me another opportunity, and a more honorable place than the halls of legislation, to express my high sense of the dignity of those occupations, the interests of which, this society is so happily designed to promote. I need not say to those who know me, that through life I have practiced and encouraged industry, and exerted my influence in every sphere (according to my ability,) in promoting the true welfare of my fellow men. I have acted upon the principle, and so have you, that it is not mere physical or mental structure that makes the man, in the best sense of the word, but the mode of life. It is not to have a head—a heart—an arm—a human body and soul, that makes one worthy of so noble a name; but to give the wisdom of that head—the strength of that arm—the combined energy of all the powers to constant and useful industry. The hard working farmers and mechanics of our country are its glory and strength; their labors have produced wealth; their honesty, their patriotism, and its faithfulness to the institutions of liberty, have given it its standing among nations; and in times of danger, their strong arms and firm hearts are its safeguard. He is not the lord of the soil who calls so many acres his own, yet has no power to use them; but he, rather, who plows and sows, and reaps and scatters abroad over the country, the products of the glorious harvest, to feed the hungry and clothe the naked. He is not master over earth's treasures who has the bare title to a mine; but rather he whose skill and industry raises the ore, reduces the metal, moulds it into countless shapes of usefulness, and sets to work the gigantic engine with its thousand hands. Farmers and mechanics if faithful to their duties, are men, in the full meaning of the word—useful men; men that the world cannot do without. Their occupations develope all the faculties, and produce "sound minds in sound bodies;" they accustom men to rely on their own strength, to love labor, and to feel that independence of other men, and that contempt for little difficulties which are the foundation of true greatness of mind.

These, fellow working men, are the occupations, this is the land,—ours are the institutions, and our fathers the stock which have produced the noblest race now living; and shall, if we value and use our privilege aright, yet exhibit human nature in its highest standard of perfection. We have resources and advantages possessed by no other nation; and a people better fitted than any other to develop those resources and improve those advantages. We need little aid from abroad, for we have every thing at home; we need little teaching from strangers, for we know best what is best for ourselves. According to my observation, farmers are too easily persuaded to look to other states and countries for the means of increasing the products of their fields, and improving their flocks and herds; we are not in England, nor at the north, nor at the south; and neither English, northern, or southern improvements are what we want. We want improvements of our own, suited to our own wants and position, such as none can make for us as well as we can make them for ourselves. Is it not better, as a general principle, both as to animals and vegetables, to choose and improve the best of such as are already adapted to our climate and soil, than to be shifting and changing, in the vain hope of arriving, by some short cut at such results as God intended we should accomplish only by close attention and the sweat of our brows?

Of all the animals created for the use of man, none has been the subject of so much observat on and esteem as the horse. In their native wilds, nature forms them into herds and groups, and gives them in command of the strongest and fleetest; and by this and other wise arrangements, of which only God is capable, guards the species against general degeneracy. The same kind care has been shown in special provision for the security of every race of animals; but when this security is taken away, and they are brought under the dominion and management of man, the most skilful attention is required in changing the general character of the species, and producing and improving distinct breeds, each adapted to its own specific purpose. It is not every breed that is suited to every locality; for climate, and the face and food of different countries, will modify the shapes and qualities, not only of the domestic animals, but of the human species; the raw-boned, industrious, hardy, and temperate man of the north becomes enervated and indolent, both in the mental and physical constitution and energies, in tropical latitudes where he reposes in the lap of luxury, enjoying without exertion, the abundance which nature lavishes around him.

The horse, best fitted to travel in the sun and sands of the south, is the descendant of the small, hard-boned, light-footed Arabian, with his high courage and silken coat; while grain-growing Pennsylvania and Ohio, with their cumbrous waggons, prefer to use a heavy corn-fed breed, that will throw a greater weight upon the collar. The north again is better served by a more compact and active race of middle size, endowed with much more strength in proportion to their weight, and greater powers of endurance; who bravely champ the bit, and nobly strain to the load with lion-like vigor; rejoicing at toil and answering to the driver's voice with proud step and martial air, as if it was the trumpet calling them to battle. Thus the wants and peculiarities—the soil, climate, and uses of each district—require and produce that peculiar breed which is best suited to itself. What better stock do we need than such as can be bred from the best of those we already [illegible] The same of [illegible]

single span, (natives of our own region,) are in the habit of drawing from Catskill over the mountains to Prattsville and back, loads of hides and leather of from thirty to fifty, and even sixty hundred weight, each wagon or sleigh not included, the distance being thirty-seven miles, and requiring three days to go and come.

The quantity thus transported within the year, is nearly two and a half millions of pounds; and the expenses the last season, including all risks and charges, was only thirteen cents a hundred. During twenty years of this service, which I make bold to assert has not been equalled by horses of any other district or country on the globe, not a horse has been been injured, in the hands of a careful driver, and to the honor of the county be it said that we have never lost a hide or side of leather, of the million and one-half thus transported.

I am aware that there are those, and among them, my friend Mr. Skinner, the experienced editor of the Farmer's Library, who have strongly recommended mules for slow and constant work; on the ground of much longer life—greater exemption from accident and disease, and more economy in feeding; but experience, the best of teachers, seems to show that the mule and the slave are destined to work together in the sunny south—both are uncongenial to us and our latitude.

The horse which we have is just the kind that we need; and if we pay proper attention, in breeding, to the selection of both sire and dam, we shall soon have, of our own raising, a class of animals that for our purposes cannot be excelled; already, indeed, two of the most celebrated trotters the country ever saw, have been raised in our immediate neighborhood. We do not want such horses as roam half wild, over the pampas of South America; they are small, light, active, always on the gallop, and admirably fitted to chase the ostrich over the sand, or the ox through the tangled grass; but when put to severe tests, they are found wanting in strength, power of enduring fatigue, and even fleetness. Neither do we want the English dray horse, which represents the other extreme; he is large and strong, like the ox, and like him, too sluggish, heavy, and unwieldy.

The requisite vigor and spirit are not to be looked for in overgrown size and fatness in the horse, any more than in the man—animation that ensures perseverance—the muscle that gives activity, and that ardor and ambition which never permits them to look back and baulk, are what is wanting in both.

What I have said as to horses being improved on the foundation of our native stock, applies with equal force to cattle.

In every settlement, a stock of good cattle is of the highest importance; and every sagacious farmer will learn to choose for breeders, such as promise best for his particular object, whether it be butter, beef, cheese, or labor; and he should study this subject with a deep feeling of scientific interest, as well as for the sake of gain. Let his first care be to put aside the very best progeny of his stock, and never permit his dearest friend to cast a wistful eye on them—nor be tempted, by any price, to sacrifice them to the butcher's knife. If he has a favorite cow of the real fill-pail breed, let him reserve and turn out that one of her calves that most resembles herself, before it grows old enough to be sold to the butcher, and always guard it with special care.

We read of premiums being given to large imported cows that have yielded some thirty quarts a day; but every dairy woman will tell you that it is not the cow that gives the largest quantity at a milking, that makes the best one in the long run. A better one still, is she that keeps on through the year, giving milk for your dairy, and cream for your table, in winter as well as summer, let the feed be short or long. Run fast, is a good name, but hold fast, is a better one.

In the Agricultural Journals, I have read an account of a middle sized country cow; I refer to the celebrated Oaks cow, bought out of a drove in Massachusetts for a mere trifle. Her history illustrates two things worthy of note: First, what we can obtain from the best [illegible] our old breeds, and secondly, how much depends on good feeding; and just as it was with the Oaks cow, so will every man find it with his farm. If he won't feed his farm, and that often and well, he need not expect it long to feed him. Always taking out of the meal tub, and never putting in, will soon come to the bottom, as poor Richard says. But to return to the Oaks cow, that did so much honor to the name of Caleb Oaks; it is stated on the most unquestionable authority, such as satisfied the Massachusetts Agricultural Society, that in the first year, with ordinary keep, she made but 180 pounds of butter;—the next year she had twelve bushels of corn meal, and then gave 300 pounds of butter; the next, 35 bushels, and she gave more than 400 pounds; the next year she had a bushel of meal a week, and all her own milk skimmed, and then she gave from the 5th of April to the 25th of September, the day of the show, 484 pounds, besides suckling her calf for five weeks. She was exhibited, and deservedly took the premium on the last mentioned day; and will carry down her owner's name, with credit, to posterity, as long as oaks grow.

After all, my friends, in respect to cattle, the true question is, not what breed can be made the heaviest, if stuffed with food, as in some countries they stuff geese and turkies, until no more can be crammed down their throats; but what breed, according to our locality and objects, will do the most work, or yield the greatest weight of milk, butter, cheese, or beef, as the case may be, from the food at our command. In cold, mountainous districts, says a writer of high authority, it is necessary to restrain, within certain limits, the ambition of having highly improved stock. In such circumstances, the grand point is to have a hardy race, not over nice in its food, which consists, through a considerable portion of the year, of but short and coarse herbage. The best milch cow, generally, as every good dairy woman will tell you, is the one that, while she is at the pail, turns everything into milk, and is least disposed to *be* or to look fat.

The same considerations that apply to breeding domestic animals, apply also to vegetables and grain. We cannot contradict nature, but we can co-operate with her, and working in her methods and in conformity to her laws produce all the results that the Creator ever designed to put within our reach. A man passing a few years ago, by a field of ripe wheat on Long Island, was struck by the rich appearance of two or three heads that grew near the road, and hung down as if the grain was of great weight. He stopped and plucked those heads, and sowed them the next season in a place by themselves, and so cultivated them year after year till they had increased to over a hundred bushels, that for color, weight, uniform plumpness of the kernels, are, perhaps, not surpassed in the country; at least, they are expected to take the premium at the approaching fair of the American Institute. This shows what we should do if we wish to carry out nature's plans, and finish what she had begun. The very best specimens should be chosen from those that have been grown on our own, or on a neighboring farm, instead of sending to a distance for such as, when we get them, will be forced, by the irreversible laws of soil and climate, to change their character, and adapt themselves to their new locality. The high scented Cuba tobacco loses its flavor on being transplanted to other countries. So the eight-rowed Dutton corn of the north refuses to exchange localities with the gourd seed of James river. Wheat, too, changes its character, and cannot be transferred from one climate to another, without losing its original color and other characteristics. As well might you attempt to transplant the beautiful hemlock of our mountains, where the God of nature placed them, to regions designed for the live oak and the olive, as to neglect the peculiar varieties of grain that our own region produces in perfection, and cultivate those whose distinctive properties are the result of a different soil and climate.

Therefore let me urge upon you to hold on upon what you have proved to be good. Choose always the best of its kind in the animal and vegetable departments, and depend on your own clear heads and strong arms for the rest. You are in the very middle region between the extreme rigors of the north and the enervating heat of the south—in the finest climate that the sun ever shone upon; and of all positions, the one best adapted to develop the human faculties and to bring forth the noblest displays of mental and physical energy, and, in a word, to grow the whole man. Rely then on yourselves to do your own work; to make your own laws; to improve your own animals and agricultural products; and to pursue, on all subjects, those investigations, and make those discoveries and arrangements, which your own interests require. Bring up your children to respect the character and to love the labors of the farmer and the mechanic; for on them at last, as I before said, does every country depend for support in peace and defence in war. Who does the world pronounce the greatest men that ever headed patriot armies in defence of freedom, in ancient or in modern times? Was not Washington a farmer? he whose fame will be as eternal as our own Catskill Mountains!

"Great Cincinnatus at the plow, with greater glory shone,
Than guilty Cæsar e'er could do though seated on a throne!"

And again;—among all the benefactors of American industry, who have contributed most to promote our national wealth and honor? With pride let me name two brother mechanics, Whitney and Fulton!

Let us, gentlemen, follow these bright examples; let us study to inform our minds and improve our hearts, and enlarge our hearts, and then we shall not only know how to increase our crops, and improve our fortunes, but how, at the same time, to benefit our country and our race.

Washington was great in war, but greater still in peace. He presided with unsurpassed wisdom and dignity over the affairs of State; but added increased lustre to both by the calm contentment of Mount Vernon Every farmer cannot expect to occupy so high a position or gain so much applause; but every one ought, in his own sphere, to practice the same strict integrity and faithful performance of duty; and be, in his principles and conduct, a Washington—possessing the same virtues, though he may never have the same glorious opportunity to exemplify them. Every mechanic cannot expect to make so useful discoveries as the steamboat and cotton-gin; yet every one can and ought to acquaint himself with all the mysteries of his art, and give diligence to make himself as capable and his work as nearly perfect as possible, and do all that Whitney or Fulton would have done in his place.

I rejoice to be able to say, not only that this is the course our farmers and mechanics ought to pursue, but also that to a great extent they are pursuing it now. The formation of this, and other like associations, and the variety, and standard worth of our many periodicals which are devoted to agriculture and the mechanic arts, show the spirit of our people. The benefit which the country receives on account of the free interchange of thought, and general diffusion of intelligence through these channels, is incalculable. An intelligent and well informed gentleman from the south, once asserted that through the influence of the Albany Cultivator alone, the wealth of that part of the country had been increased more than two millions of dollars.

Before I close these remarks, let me suggest (being myself a father, with some opportunities of observation,) that you should incline your sons above all things, to prize that honest station, however humble, which is gained by personal industry, and enjoyed without dependence on the capricious breath of party, or of any mortal man in power.

Any honest pursuit will be esteemed by a young man, of independent spirit and honorable ambition, in preference to being seen lounging in the anti-chambers of public departments, and the lobbies of the capitol, a suppliant for the precarious emoluments of office. Let it ever be deemed a high honor by those who are qualified to be called on to serve the people; but when you see your son, made in the image of his God, inclined to quit the handles of his plow, or throw down his hammer and sell his birth-right for a mess of pottage—put into his hands the homely fable of the dog and the wolf, which inculcates the love of independence as a boon above all price.

It is the independent spirit of our people that ranks them above all other nations of the earth: because each man has, in himself, the ability and resolution to accomplish his ends of and by himself; it is on this account that an American can be cast penniless and alone in any corner of the earth, and amongst any people, and instead of wasting his life out, a poor and despised stranger, he will summon his energies and bear himself like a conqueror.

Whatever the natives are doing, he does it better than they; he makes the most money—exerts the most influence, and soon becomes a leader and a prince among them; from soling a shoe to heading an army, he shows himself in all things capable, in all things superior; and having accumulated sufficient fortune for himself, and honor for his country, abroad, he returns to lay at her feet the spoils of other lands, and enjoy, in his native home, the society of equals. What does such a man want of official patronage or protection. He scorns to eat the bread he has not earned, or to enjoy honors he has not deserved.

I should give, however, but half the praise that is due to my countrymen, did I not add that, remarkable as they are for independence of spirit and ability to take care of themselves, they are equally distinguished for benevolence, true politeness, and a liberal and enlightened regard for the best interests of others. No where on the globe are women treated with more tenderness and respect, and no where are they more worthy of it. It is, indeed, under the gentle and kindly influence of mothers, sisters, and wives, that the best points of our national character have been formed; and who would not yield to that influence? If men have all the strength, women have all the loveliness; strength is needed to protect loveliness, and loveliness is equally needed to adorn strength.

Depend upon it—the young man who pretends to despise the society of virtuous females, does so because his conscience tells him, secretly, he is unworthy of it.

Intending always to practice what I preach, it has been with me a matter of pride to appear before you today, clothed in the produce and manufacture of our own country. With the labors of our own husbandmen, and the skill of our own mechanics, no man need send abroad for subsistence or clothing. For my own part, so fully am I impressed with the importance of looking for comfort and happiness, within ourselves, that I would have the very children in our schools taught to sing the old song, which says:

"I'll eat my own ham—
My own chicken and lamb,
I'll shear my own fleece and I'll wear it."

Z. PRATT.

ENTOMOLOGY.

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L. TUCKER, Esq.—Being very desirous of completing the history of some of the insects that are injurious to wheat, I take the liberty of writing to you, to beg the favor of your aid in promoting my object.

In the sixth volume of that most excellent paper, "The Cultivator," there is a description of a depredator on the wheat, stated, by the lamented Willis Gaylord, Esq., to be a caterpillar, provided with 12 feet, six of which are near each extremity of the body, and having the power of spinning and of suspending itself by a silken thread. Mr. Gaylord says that it is of a yellowish brown or butternut color; that it not only feeds on the kernel in the milky state, but also devours the germinating end of the ripened grain, without, however, burying itself within the hull; and that it is found in great numbers, in the chaff, when the grain is threshed. (Cultivator, VI., p. 43.)

Mr. Nathaniel Sill, of Warren, Penn., has given a somewhat different description of it. (Cultivator, VI., p. 21.) On threshing his winter-wheat, immediately after harvest, he found among the screenings a vast army of this new enemy. He says that it was a caterpillar, about three-eighths of an inch in length, when fully grown, and apparently of a straw color; but when seen through a magnifier, was found to be striped lengthwise with orange and cream color. Its head was dark brown. It was provided with legs, could suspend itself by a thread, and resembled a caterpillar in all its motions. Insects of the same size as these caterpillars, and of a brownish color, have been observed in various parts of Maine, where they have done much injury to the grain, devouring the kernels in the milk, and also after they have become hard. These wheat-worms, or wheat-caterpillars, are supposed by some persons to be identical with the clover-worms, found in clover, and often seen spinning down from lofts and mows where clover has been stowed away. A striking similarity between them has been noticed by a writer in the "Genesee Farmer," as quoted in the seventeenth volume of the "New England Farmer," p. 164.

If these creatures be really caterpillars, as they would seem to be, from these several accounts, they must eventually change their forms, first to chrysalids, and then to winged moths. In order to go through their transformations, they may either, like the canker-worms, go into the ground, or they may conceal themselves in rubbish or in crevices about the barn, before turning to chrysalids. If a considerable number of these caterpillars were confined in a box, partly filled with moist earth, and covered with a little moist moss, (sphagnum,) they would probably complete their transformations therein, but they must not be entirely excluded from the air more than a day or two, before they have changed to chrysalids. Secured in this way, the insects would probably bear transportation to Boston. If a collection of them, or of the chrysalids, properly secured, could be sent to the care of my friend, Joseph Breck, Esq., agricultural warehouse, North Market street, Boston, they would reach me immediately, and the receipt of them, in good condition, would gratify me very much, and would enable me to obtain the insects in their winged state, and thereby to determine their scientific characters.

As "The Cultivator" has an extensive circulation through the region where these insects have prevailed, if you should be pleased to call the attention of your numerous subscribers to the subject, it is my hope that a return corresponding to my wishes may be obtained.

THADDEUS WILLIAM HARRIS.

Cambridge, Mass., Nov. 9, 1846.

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REMARKS.—The insect concerning which information is requested in the above communication, or a very similar one, was known to us several years since. In 1834, while the writer was residing in Maine, it occasioned him considerable damage by attacking his wheat. At the time the wheat was threshed, (the month of September,) the insect was found among the grain, in great numbers, both in the larvæ and perfect state. It is believed to be the same which at one time created considerable alarm in central and western New-York, under the name of "*wheat-worm*," and which, by some persons not familiar with insects, appears to have been considered identical with what in New England, and some other sections, was mis-called "*the weevil.*"

We are inclined to think it is the same insect that is described by CURTIS, in one of his papers on the "*Natural History and Economy of various Insects affecting the Corn-crop*," &c.—Journal of the Royal Agricultural Society, vol. V. pp. 481, 505. He places it with the family of Night-moths, under the name of *Noctua cubicularis*, (*N. quadripunctata*, of Fabricius, *N. segetum*, of Esper.) His description of the moth is as follows:

"It is of a brownish mouse-color; antennæ like bristles; eyes fuscous; palpi short and scaly, with a pitch-colored patch on the outside; abdomen rather slender, obtuse at the apex in the males, conical in the females: wings lying horizontally and incumbent in repose, forming an elongated triangle, superior long and narrowed at the base, with three irregular and crenated transverse lines, forming little black spots on the costa;

the first is near the base, the second before the middle, and the third beyond it; between these is a round and kidney-shaped spot; between the third and the posterior margin, which has a line of black dots, is a sinuated ochreous line, reddish and suffused on the inside, the external space dark fuscous; inferior wings pearly white, slightly tinged with brown next the cilia, the nervures brownish: length 6 lines, expanse 14 or 15 lines."

Mr. Curtis observes that in England—"This moth is common in hay-fields and about hay-ricks in May, June, and July, as well as on willows, in gardens, &c." This would appear to strengthen the idea that it is identical with the insect, the larvæ of which is sometimes called "clover-worm."

Dr. Harris' treatise on insects is an excellent one, and reflects great credit on its author; but its value would have been greatly enhanced, if it had been accompanied by illustrations. The work was originally written at the instance of the Legislature of Massachusetts, by whom the expenses attending its publication were, we believe, principally defrayed. The State certainly deserves credit for the liberal discernment and regard to the interests of the people, which it thus evinced; but a work on which so much care and labor has been bestowed, should be made as perfect as possible; and we cannot but hope that in bringing out a new edition, the State will furnish the necessary aid for accomplishing the improvement suggested.

NEW-YORK STATE AGRICULTURAL SOCIETY.

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At the regular monthly meeting of the Executive Committee of the New-York State Ag. Society, for October, the following resolutions were unanimously adopted:

On motion of Mr. Vail, of Rensselaer,

Resolved, That the thanks of the society be presented to James Lenox, Esq., for his donation of 30 copies of "Washington's Letters on Agriculture."

On motion of the President,

Resolved, That the thanks of the society be presented to Mr. George Fordon, of Geneva, for the skill and spirit he has manifested in breeding and exhibiting at our shows so many fine farm horses.

At the meeting of the Executive Committee for November, the following resolutions were adopted:

A letter having been read from F. E. L. Fischer, Director of the Imperial Botanic Garden, St. Petersburgh, Russia, announcing that he had forwarded to the Society a copy of a new Botanical work, just published at St. Petersburgh, on motion of Mr. Tucker,

Resolved, That the thanks of the N. Y. S. A. Society be presented to F. E. L. Fischer, of St. Petersburgh, Russia, for the donation announced in the above letter, and that a copy of the Transactions of the Society for 1845, be forwarded to him.

On motion of Mr. Tucker,

Resolved, That the thanks of the Society be presented to its President, Mr. Sherwood, of Cayuga, for a copy of the Census of the State of New-York for 1845.

Resolved, That the thanks of the Society be presented to Joseph Fellows, Esq., of Geneva, for his donation of fifty dollars in behalf of the Pultney estate.

On motion of Mr. Vail,

Resolved, That the Recording Secretary and Treasurer procure Daguerreotype portraits of all the Presidents of the Society, and that the Treasurer be authorized to pay for the same.

On motion of Mr. Sherwood,

Resolved, That the Treasurer of the Society be directed to keep charge of the rooms of the society; and to provide for its being kept open for the business of the Society, until further action of the Executive Committee.

On motion of Mr. Vail,

Resolved, That the President, Mr. Prentice, and Mr. McIntyre, be authorized to invest in bond and mortgage, such sum of money as is now in the treasury, as will not be needed to pay premiums now awarded, and to pay also contingent expenses of the Society.

On motion of Mr. Sherwood,

Resolved, That the Treasurer employ some suitable person to color the plates of the "Jardin de St. Petersbourgh," at a price not to exceed twenty-five cents for each plate.

The Committee then adjourned to the 2d Thursday of December next, at 10 o'clock.

Present—Mr. Sherwood, Mr. Vail, Mr. Stevens, Mr. Tucker, Mr. McIntyre.

VARIETIES OF FRUITS AND VEGETABLES,

Affected by Soil and Climate.

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It is well known that varieties of fruit are greatly affected by soil and climate. For instance, a standard of the relative excellence of different kinds of apples and pears, drawn up for a particular section, would be wholly inapplicable to other sections; with a change of location, the quality of the fruit would change, and the standard might be reversed. All this is often witnessed in the transfer of fruits from Europe to this country, and it is not uncommonly seen here in shifting from one district to another.

Does not this principle hold good in reference to varieties of grain and vegetables? We think it does. Some kinds of potatoes, for example, appear to do better, compared with other kinds, in some neighborhoods, than they do in others. Some sorts have also been known to be more exempt from blight in some places, while in other places they have failed. Dr. Emmons, in the *Quarterly Journal of Agriculture,* has some sensible remarks on this subject. "At first view," says Dr. E., "it seems that the same variety ought to hold out at all times and all places against the enemy. But it may be, after all, that varieties, like species, require a particular soil to bring them to a high standard of excellence. For instance, one variety attains its standard of perfection in a light soil only, whereas another variety requires a strong clayey soil. They are secure from disease only when they are cultivated on that soil which they require to reach their standard of perfection. Now some varieties, like some species of plants, are not so fastidious in their food, and hence do well if they have but a middling chance. The Merinos, or Long Reds, seem to be of this description. However all this may be, it is an important inquiry what soil is best suited to a given variety of potato. We know that some apples, as the Newtown pippin, must have a deep strong soil, and comes to nothing when planted in a poor soil. And why should there not be the same variety in the habits of varieties of potatoes, as in apples and other fruits."

Artichokes.—Mr. Noble, of Massillon, Ohio, still continues the culture of artichokes. In a conversation we had with him a few months since, he stated that if it had not been for this crop, (of which he had several acres,) last season, he did not know how he could have got his sheep and other stock through the winter. He cut the tops and dried them for fodder; and the stock ate nearly the whole clean, scarcely leaving even a piece of stalk. The roots mostly remained in the ground till the frost had so far left it in the spring, that they could be dug. The tops, he says, yield from 5 to 6 tons of fodder per acre.

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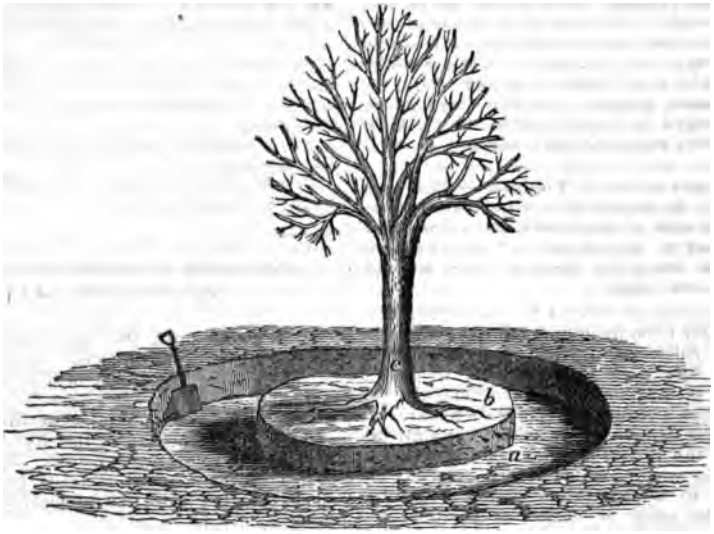
Oats and Peas.—The N. Y. *Farmer and Mechanic,* says that Elijah Fillmore, of ———, sowed last spring, one bushel and three pecks of peas, and two bushels and twenty quarts of oats, on one and a half acres of land, which yielded 54½ bushels of peas besides the oats. This piece of land, it is said, was cleared by his father 76 years ago, and has been under the plow ever since, except that it has been twice seeded down, about 5 or six years each time



RENOVATING A PEAR TREE.—Fig. 109.

J. B. W., gives, in the *Horticulturist*, (from which work we take the above cut,) an account of the manner in which he renovated an "outcast" pear tree. The writer of that article resides in Westchester county. He says that his Virgalieu pear trees, though they once bore excellent crops, had become nearly barren—producing "only cracked, blighted, miserable fruit." He determined to see what could be done for them, and began with a trial with two trees in October, 1843, since which, he says, he has taken two crops of beautiful fruit—as good as grew on his farm twenty years ago.

He describes the process he pursued with the trees as follows:—

"I first scraped off all the rough outer coat of bark, and coated the trunk of the tree over with soft soap, put on with a paint brush. I next cut out about one-third of all the poorest branches, and shortened the head of the tree one-third, by 'heading back' the principal limbs, covering the wounds after paring them, with the 'shellac solution,' (the best thing I have ever tried,) recommended on page 32 of the 'Fruits and Fruit Trees of America.'

"I then dug a trench, four feet wide around the whole ball of roots, very much as if I were going to transplant it. I left a ball of roots, *b*, untouched about six feet in diameter. The roots—all the roots, large or small—that extended beyond this ball, I cut off; and I should judge that I cut off about one-third of the roots; or, as you advised me, about an equal proportion to the branches reduced.

"The trench itself, which was four feet wide, I dug twenty inches deep; and carted away all the old soil from it to another part of my garden. I next carted in an equal quantity of soil from a field of good pasture, where the sod had not been broken up for several years. I drew this earth, composed pretty largely of the sod itself, and filled the trench around both trees.

"To each tree I applied the following substances, viz: two bushels of refuse or scoriæ from a blacksmith's forge, two bushels of charcoal, pretty well broken, and two pounds of potash well pulverized. These substances I had on the spot, and mingled them with the fresh soil as it was put in the trench. After the trench was full of soil containing these stimulants, I had the whole of its contents thoroughly intermixed, by turning them over and over again with the spade. This is the whole of the process. Now a word about the results.

"The first summer after the trees had been operated upon—that of 1844, I was surprised and delighted with the luxuriance and vigor of the new growth. It was very healthy, and had the appearance of that of a very fine young tree. Suffice it to say, the tree had formed a new and handsome head.

"Next season, 1845, it blossomed moderately. But almost every blossom set, and gave me a fruit. Every fruit, to my great joy and satisfaction, was large, fair, and smooth; the growth was clean and healthy, and the leaves dark green in color.

"This year, I have had a fine crop: two bushels from one tree, four bushels from the other. They were superb fruit—genuine, old-fashioned Virgalieus; and I cannot doubt that my trees will continue to bear such for many years."

REVIEW OF THE SEASON.

THE most remarkable characteristic of the past season, may be said to have been the prevalence of a high degree of heat for a longer period than usual; the weather having been mostly very hot from the first of June to the 10th of September. In general, there has been a greater supply of moisture in the shape of rain, than in 1845. Drouths have occurred in some sections, but not to the same extent they did last year. The seaboard, from Texas to Rhode-Island, has had quite an unusual quantity of rain.

Upon the whole, the season has been favorable for most crops. In some sections of the western part of the country, as in the valley of the upper Mississippi, we have heard of some injury from drouth. From the central and western portions of this state, also, we have heard the same complaint.

Wheat has yielded well, generally—the crop giving, it is believed, a greater aggregate quantity for the whole country, than has ever been produced in any previous year. Accounts from the southern states, speak of the crop having been unusually large; but it appears that considerable damage was sustained in consequence of heavy and long-continued rains; which, occurring while the grain was standing in shock, caused it to sprout. In some of the southern districts of Pennsylvania, the Hessian fly, (*Cecidomyia destructor*,) damaged the crop, and in the county of Onondaga, and some contiguous counties, in this state, the ravages of the "weevil" are stated to have been quite injurious. In the western wheat-growing states,—Ohio, Indiana, Illinois, Wisconsin, Michigan, &c., the yield is everywhere spoken of as uncommonly heavy, and of excellent quality.

Indian-corn has proved a heavy crop over the whole country. We do not recollect a year when this crop has been so universally good. It is gratifying that this great staple of our country has come in so abundantly, as in consequence of the increasing demand for it in England, it now bears a good price in our sea-ports. Some cheap mode of kiln-drying, or preparing this article for transportation, is highly desirable. Its liability to injury by fermentation, or to become *musty,* when kept for a length of time in bulk, is a serious draw-back on its value for exportation; and probably prevents it from being generally received in England in that perfectly sweet condition, necessary to allow the people to form a correct estimate of its excellence. Hence, we presume, chiefly arises the "prejudice" which is said to exist against the use of Indian-meal in England and Ireland. If the inhabitants of those countries could have the article prepared in its best forms, as it is *sometimes* to be met with here, we cannot believe their taste is so opposite to ours, that they would not relish it. Every good American house-wife knows that for culinary uses, it is important that corn-meal be *fresh and perfectly sweet;* and when corn or meal is only transported, by the ordinary modes, from the interior of our country to the Atlantic ports, it is not easy to find it in that condition.

Rye, barley, oats, and *buckwheat,* have generally given good yields.

Fruit, taking the country together, has probably been as good as usual. Peaches were unusually plenty in the eastern states, though the quality, from a deficiency of flavor, was rather inferior to the product of seasons in general. Apples are more plenty than last year, notwithstanding the deficiency in some small districts, caused by spring frosts.

Potatoes—a crop, which, though of less comparative value here than in the British islands, is yet of great importance—have in nearly all parts of the country, suffered greatly from the malady known as "rot" or "potato-disease." Compared with 1845, we cannot say that the damage from this cause has been greater in this than in the former year. The injury occurred, for the most part, at an earlier period, the present year—(the first week in August)—and the rotting appears to have been generally so far checked, that at the time of digging the crop, the tubers found were mostly sound. We have, however, heard of some instances in which the rot seemed to come on a second time, towards the latter part of the season. The condition of the crop since it was secured, seems to be quite various in different places. A farmer from central New-York, informed us a short time since, that his potatoes were rotting so badly in the cellar, that he had been under the necessity of sorting them all over, and even with all precaution and care, he feared he should not be able to save any for seed. We have heard a few instances of their rotting in the cellars in the neighborhood of this city; but are, nevertheless, inclined to think that they are in better condition, in most cases, than was the crop of 1845 at the same time in the year.

As to the *cause* of this destructive malady, as we have said on a former occasion, we are convinced but little is known; and we are equally convinced that no reliable remedy has been discovered. To these conclusions have all come, so far as our knowledge goes, who have carefully considered the matter, whether in this country or across the water.

At the late meeting of the British Scientific Association, at Southampton, where this subject was discussed, Prof. Playfair said—"it was of no use to attempt to account for an affection of which they were entirely ignorant." He said he had the "misfortune" to have been one of the potato Commissioners appointed by Government, "and after all his experience in that capacity, he freely confessed he knew less about the disease now, than when he began his experiments."

Dr. Lindley, in a late number of the (London) *Gardners' Chronicle,* thus enumerates the various theories and remedies which have been proposed in reference to the disease:

"Plant on hot dry land, says one; dress your land with lime, cries a second; lime and salt are better, writes a third; use plenty of potash or soda urges another. Raise seedlings, shun guano, get sea-weed, fetch sets from Peru, plant on slopes facing the sun, plant on slopes facing the north, buy Professor Hook-the-Simple's 'steep;' and twenty more panaceas are offered to the poor public, which stands bewildered by the kindness of its multitude of friends. And well it may, for it possesses imperfect means of judging of probabilities in a case like this, and has no power of distinguishing between right and wrong. For ourselves, we feel it would be as presumptuous in ourselves, as in others, to hazard any recommendations, where all is confessedly most uncertain."

We believe it to be true that several kinds of vegetation, during the past summer, were affected in a similar manner with the potato. Prof. Emmons, in the last number of the *Quarterly Journal of Agriculture,* states, that the same week in which disease first appeared on the potato, "the leaves of several elms began to dry and grow brown upon their edges, and in a few days terminated in the death of those leaves, when they fell off. Besides the elm, a few maple, horse-chestnut, plum, bass, and buttonwood trees, were affected in a manner quite similar." We noticed the same appearances at the time mentioned; and we observed, also, that the *carrot,* (especially the white carrot,) was attacked in a very similar manner, and it has, in many instances, rotted as the potato has done.

BUSINESS FOR WINTER.

In the northern section of the country, not much can be done on the farm during the winter months; but the care of stock, the procuring and preparation of fuel, will necessarily occupy much time.

If pastures and fields are covered with grass which it is deemed advisable to feed off, stock may be turned on for that purpose when the ground is not soft, but they should be kept away when there is a liability of poaching the soil. In general, cattle and horses had better be fed in the barn, or in suitable fixtures belonging to the barn-yard. The extra quantity and quality of the manure which may be saved from keeping them in this situation, will more than compensate for the trouble of feeding them. Sheep, however, while the ground is bare and *dry,* may run out, more or less, according as there should be food for them on the ground.

The poorest fodder should be reserved for the coldest weather, after the stock has become *seasoned* to dry food, and when their appetites are sharp. Last spring's calves should be fed on rowen, or second crop hay, as it is less binding in its effects on the bowels than hay from the first crop. A few potatoes, carrots, or turneps, given daily, will be found very beneficial. Cattle intended for slaughter, should be fed with strict regularity, in clean mangers; and they should have clean, dry, and comfortably warm places to lie down and sleep.

Farther south, where little or no snow falls, a system entirely different from ours, is pursued with fatting cattle. Instead of being sheltered, they are kept usually in open fields, and fed principally with Indian corn, stalk, ear, husk and all, without any other preparation than to cut and shock the corn at the proper time, and carry it to the fields from day to day. At first, it would seem that there must be great waste in this mode of feeding, and there is unquestionably more food used in making a given quantity of meat, than is required where a well regulated system is adopted. But it should be remembered that a great object in those sections, is the saving of manual labor, that being proportionately a much dearer article there, than beef, or the materials from which beef is made. Hence, on the score of economy, it may be better to waste some corn, than to expend too much labor in saving it all.

Three fields are usually appropriated to stock-feeding. The fatting cattle are fed in each of these, in regular rotation, and are followed in the course by store cattle and swine, to clean up what is first left. Where care is taken to choose dry land, with a firm, clean sod, and close attention is paid in feeding, there is less wasted, when the hogs have cleaned up the field, than would be supposed by one unacquainted with the practice. Still, with the carelessness which too often prevails,—the cattle being fed in too small fields, or such as become muddy at times, or covered with manure—there is much waste and loss, both from the food not being eaten, and the stock being kept in uncomfortable places, where, if they thrive at all, it is but slowly.

Wood and timber should be cut and hauled if practicable, before deep snows. There is economy in this on several accounts. More fuel is saved, and more labor is done in a given time, with less expense, and far more comfort to all engaged in it. Rails for fencing may be worked out to good advantage in mild weather, and in stormy days, if there is a suitable place to work under cover, posts may be mortised and made ready for setting. Stones for walls may be readily moved, when there is just snow enough on the ground to make good sledding.

Peat for manure may be dug in many places. If designed for use next season, and without being made into compost, it will be best to spread it on the fields at once, and expose it as much as possible to the action of the air, frost, and rains, by which any acid it contains will be dissipated, and it is rendered fine and fitted for vegetable food. While bogs are frozen hard enough to bear a team, is a good time to carry off the peat which has been dug. If not wanted soon, it may be piled in large piles, in situations where it may be reached at any time.

GATE HINGES.

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A good and cheap gate-hinge was lately shown to us by Dr. W. D. Cook, of Sodus, N. Y. It is represented in the annexed figure, the lower hinge being merely a short rod or bar of iron. A, fig. 110, bent at a right angle, so that one end passes into the gate post B, and the other into the foot of the gate through a circular iron ring or washer. The upper hinge is made by attaching a short piece of cap-timber, to the upper end of the post, by a mortise, as shown by the dotted lines, projecting towards the gate, and with a two inch auger hole to receive the rounded end of the upright bar C.

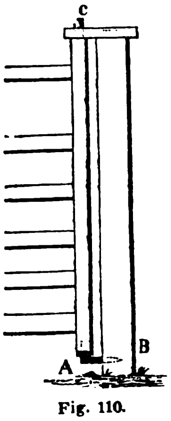

Fig. 110.

This contrivance is not only recommended by its cheapness, but by the ease with which a single hand may place the gate on its hinges, the difficulty of adjusting two entering points at the same moment being removed.

Good hinges are also made of cast iron, at less than half the usual expense, and not inferior to those of wrought iron, as shown by Fig. 111. The hook A, on which the hinge turns, should be of good wrought iron, the bar B, forming the rest of the piece, being cast round it. The bar C, through one end of which the hook or iron pin A passes, is entirely of cast ron. Both of them are notched on the lower sides, so hat after placing them in the holes made in the gate and posts for their reception, they are firmly secured by driving a wooden wedge or pin into the holes above them.

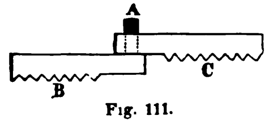

Fig. 111.

IMPORTATION OF LEICESTER SHEEP.—We learn that he Hon. Henry Clay has lately imported from England, some very superior Leicester sheep, 6 ewes and 2 ams, which have been forwarded to his farm in Kentucky. Their cost in England is said to have been $100 each.

MR HORSFORD'S LETTERS.—NO. XV.

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Giessen, Oct 10, 1846.

Mr. Tucker—You have doubtless seen, in the reported proceedings of the British Association, that Prof. Schonbein, of Basle, Switzerland, had discovered or invented and exhibited, at the recent meeting of scientific men in Southampton, an *explosive cotton*, that in many respects promises to supplant the best varieties of gunpowder.

It exploded, entirely disappearing without smoke or smell, at a temperature of 400 degrees C., while the best rifle powder required a heat of some 600 degrees C. The cotton preparation exploded even with a stroke of the hammer, and underneath piles of ordinary gunpowder, without firing them—as is the case with fulminating silver and quicksilver. Soon after the announcement of Schonbein, here, in Germany, Prof. Boetger, of Frankfort, made the same discovery, and united with the Basle Professor in an arrangement to share the profits of rewards from Government, whatever they might be. The newspapers abounded with records of experiments made under the direction of artillery officers, and crowds came about the laboratory of Prof. Boetger to see the new cotton, and witness its effects in throwing balls, which so far surpassed those of ordinary powder.

Naturally enough, a great number of chemists commenced experiments in the hope of finding out the secret. Among others, several of the young chemists in the Giessen Laboratory, and I among them. We have had the pleasure here to make a cotton that exploded at a low temperature, but by no means equalling in power that which had gained such renown.

Yesterday, appeared in the newspapers a communication from Prof. Otto, of Brunswick, containing his discovery, of which the following is the substance.

He had gone forward in his experiments from the suggestion of Pelouze, made several years since, that paper, which is chiefly composed of cotton, might be made explosive, by saturating with nitric acid. The chemical constitution of cotton may be written thus:

C H O

Five atoms of this with two of nitric acid, give the elements for five atoms of carbonic acid, five of water, (vapor,) and two of nitrogen, products that have no smoke and no smell.*

Pelouze failed to realize, practically, the idea above expressed. Paper is cotton with too small surface. Otto found, by dipping cotton for an instant in concentrated nitric acid, and then drying it, that he had, as he considers, the wonderful product.' Here the cotton is nearly all surface. By too long digestion in nitric acid, new products are formed, xyloidin, probably, among others. By treatment in diluted nitric acid, water enters the delicate cotton fibres, and prevents that actual contact, if not combination of the nitric acid, essential to the explosive character.

The nitric acid was prepared by distilling from 1 part of saltpetre in 6 parts of concentrated sulphuric acid.

Prof. Otto claims a share in any rewards that may be made for the discovery.

There is unquestionably much improvement to be made in the article, before the full value of the invention can be ascertained. For mining, quarrying, and some kinds of military service, it promises to be of great use. For ordinary fire-arms, and probably for cannon, I cannot help doubting its profitable employment. The experience of France under Napoleon, has shown that a powder from charcoal, sulphur, and saltpetre, may be made so strong that it cannot be profitably used.

I understand that the Messrs. Schonbein and Boetger have proposed to our Government to purchase their se-

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* $5CHO + 2NO_5 = 5CO_2 + 5HO + 2N$.

Common gunpowder consists before explosion, of

$$KO, NO_5 + S + 3C,$$

which in exploding becomes

$$KS + N + 3CO_2$$

cret of manufacturing this new material for military service. If it be so, the publication of Prof. Otto's communication should be extended to America as well as to Europe.

I send you herewith a specimen of the explosive cotton as prepared to-day by Prof. Liebig—not, however, according to Otto's method. What his method may be, I am unable to say. By drying it a minute on a stove, and then firing, you will witness its chief characteristics. E. N. HORSFORD.

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[The cotton sent by Mr. HORSFORD has been tried here, and it evidently possesses considerable explosive power. Prof. AGASSIZ, who was present when some of it was fired, stated that it differed considerably from the "gum cotton of SCHONBEIN—the latter being produced from gum, and that sent by Mr. H. being (apparently) common cotton with the preparation described. Prof. A. thinks there is no doubt that SCHONBEIN's invention will, to a great extent, displace gunpowder.]

INQUIRIES.

CRANBERRIES.—B. W., (Pemberton, N. J.) We refer you to our last number, pages 336, 354.

SOILING.—DELAWARE FARMER.—You will find the information you seem to require, by reference to the Cultivator for 1845, page 22, and to our last number, pages 331, 332.

CLUSTER PEA.—J. A. B., (Cazenovia.) We know nothing of this pea, excepting from the communication of Mr. SPINNER, in our number for April last. If any person has any further knowledge of it, we should be glad to hear from hem. If it has been *proved* valuable, we should like to know where seed can be had, and at what price.

JERUSALFM ARTICHOKE.—J. A. B. We see no reason why this vegetable is not adapted to general cultivation. Any one who has a few bushels of the seed to spare, will please inform us.

REFUSE POMACE.—J. A B. We have seen this article often used as manure, but in no instance with much benefit. The acid retained a great while, and it is very hurtful to vegetation. In its raw state it will kill thistles, briars, &c., and we have known it used for that purpose. We have seen some attempts to work it with lime and ashes, but the conclusion was that "it cost more than it come to."

MACHINE FOR CUTTING GRASS.—P. S. A., (New Wilmington, Del.) The only machines of which we have heard, that are used for cutting grass, are such as are used for cutting grain—commonly called harvesting machines. Mr. HUSSEY's and Mr. MCCORMICK's we had supposed were as good as any for this purpose; but there may be others which answer better.

FOREIGN.

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The news by the Acadia, which arrived at Boston on the 16th ult., has had a tendency to lower the prices of breadstuffs, particularly flour, in this country. The demand in England and Ireland is likely to be less than had been previously anticipated. There is no doubt that there is considerable scarcity, and in some districts much suffering among the inhabitants; but grain has been hurried into all the British ports in large quantities, which will probably go far towards affording a supply. The following paragraph from the *Bankers' Circular*, may be worthy of note as an indication of the state of the foreign market:

> "Our belief is that, so far from wanting an import of four millions of quarters, if there were not one bushel imported in addition to what has been now purchased for England, plenty of food will be found in the British islands to feed the people, at the present rate of consumption, until September, 1847."

At the latest dates, the demand for Indian corn continued, though flour had declined; and a small decline is said to have taken place in American beef, pork, and cheese.

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ALBANY, DECE

CIRCULATION OF "THE CULTIVAT

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IN order to show such of our friends as to aid in the circulation of our paper, wh done in some places , and what undoubte done in many others, we publish a list of offices to which we now send *fifteen* or We should, of course, be highly gratified t list greatly extended for our next volume.

Maine.	
Bangor,	15
New Hampshire.	
Walpole,	22
Westmoreland,	15
Vermont.	
Arlington,	17
Bethel.	22
Burlington,	60
Bellows Falls'	20
Bennington,	15
Brandon,	26
Burlington Falls,	15
Bridport,	17
Brattleboro,	15
Chimney Point,	15
Castleton,	16
Charlotte,	29
Cornwall,	15
Derby,	40
East Poultney,	32
Fayetteville,	25
Grand Isle,	25
Hinesburgh,	18
Middlebury,	34
Manchester,	20
New Haven,	18
North Ferrisburgh,	15
Orwell,	15
Pawlet,	26
Pittsford,	16
Rutland,	138
Stow,	15
Salisbury,	16
St. Albans,	18
Shoreham,	28
Shelburne,	25
Underhill,	15
Vergennes,	23
Warren,	15
Whiting,	19
Winooski Falls,	17
Windsor,	16
Westford,	24
Waitsfield,	18
Williston,	32
Massachusetts.	
Boston,	291
Deerfield,	18
Easthampton,	15
Fall River,	35
Middlefield,	17
Newburyport,	21
Northampton,	28
Richmond,	15
Springfield,	94
Worcester,	16
Wilbraham,	23
Rhode Island.	
Providence,	73
Connecticut.	
Avon,	16
Bristol,	21
Berlin,	15
Bridgeport,	19
Cheshire,	23
Chapinville,	15
Columbia,	15
Darien,	15
Danbury,	15
Farmington,	33
Litchfield,	15
New Milford,	27
New Canaan,	18
New Britain,	15
Portland,	15
Sharon,	15
Suffield,	22
Windsor,	17
Watertown,	21
West Hartford,	28
Waterbury,	16
New-York.	
Albany,	174
Amsterdam,	23
Ameniaville,	15
Auburn,	204
Argyle,	19
Accord,	15
Aurora,	17
Baldwinsville,	26
Bellisle,	15
Batavia,	27
Buel,	15
Buffalo,	54
Barcelona,	31
Beekmantown,	16
Binghamton,	24
Burnt Hills,	22
Ballston,	15
Bath,	18
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TO CORRESPONDENTS.

COMMUNICATIONS have been received, since our last, from Henry M. Earle, Samuel Wait, Jr., J. G. Clark, Jr., B. W., Wm. Bacon, Prof. J. P. Norton, Glenallen, Thaddeus W. Harris, S. P. Rollo, Prof. E. N. Horsford, Mrs. B. R. Voorhees, Joseph A. Badger, A. Fitch, Peter S. Alrich, Samuel Leech.

BOOKS, PAMPHLETS, &c., have been received as follows:

Norman's Southern Agricultural Almanac for 1847; edited by Thomas Affleck, Esq. Published by M. B. Norman, New-Orleans.

Catalogue of Fruit and Ornamental Trees and Plants, cultivated at the Lake Erie Nurseries, Cleveland, Ohio. Elliott & Co., proprietors.—Also, of Arch Spring Nursery, Washington county, Md., by D. & J. Reichard.—Also, of Kinderhook Nursery, Columbia county, by Henry Snyder.—Also, of the Ashton Nurseries of Thomas Hancock, near Burlington, N. J.

The Sentinel and Witness newspaper, containing the Reports of the Middlesex (Conn.) Ag. Society.

Gen. Chandler's Address, delivered at the close of the late Fair of the American Institute.

Prince's Catalogue of Bulbous and Tuberous Rooted Flowers--also, his Supplementary Catalogue of New and Rare Fruits.

Dealings with the firm of Dombey & Son, Wholesale and Retail and for Exportation; by Charles Dickens, Boz.) With illustrations by H. K. Browne. No. I. To be completed in 20 Nos. at 8 cents each. Published by Lea & Blanchard, Philadelphia.

GOOD CROP OF POTATOES.—HENRY BUTMAN, of Dixmont, Maine, states in the Boston Cultivator, that he raised 1000 bushels of potatoes on 1¼ acres of ground. The variety was the Long-reds, or "Merinos." They grew on a deep soil, on which had been burned, the year previous, a large quantity of rubbish, logs, bushes, &c., and the ashes plowed in. The next season the potatoes were planted, after another plowing, without any dressing

MONTHLY NOTICES.

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CULTIVATOR OFFICE.—The publisher of The Cultivator, having become the proprietor of the "Albany Agricultural Warehouse and Seed Store," has taken the large store, No. 10 Green-st., in the most central part of the city, to which he has removed the offices of the Cultivator and the Horticulturist, together with his Ag. Warehouse and Seed Store, and where he will at all times be pleased to receive calls from any of his subscribers who may visit the city.

☞JOHN P. NORTON, Esq., of Farmington, Ct., left here on the 16th of September last for Europe. His intention, we understand, is to pass a year, or more, at various scientific institutions; and on his return to this country, it is expected he will assume the duties belonging to the newly-established professorship of chemistry, &c., at Yale College. Mr. N. took Scotland on his way to the continent, and from Edinburgh we have an interesting letter from him, which we shall give in our January number. He will also favor us, as heretofore, with frequent communications, which, as our readers will be glad to learn, will appear from time to time in our columns.

PROF. AGASSIS, of Neuf-Chatel. This gentleman, of whom it may safely be said that he stands at the head of living naturalists, has arrived in this country since our last number went to press. He intends spending at least two years in the United States, to study our natural history in every department, both fossil and recent. Having already made a rapid tour of our principal cities, and visited naturalists of these places, he has returned to Boston, preparatory to his course of lectures at the Lowell Institute. In his visit to our city and the State Geological Rooms, he highly complimented the liberality of our legislators in commencing and continuing the scientific researches which have resulted in so splendid a collection, and the publication of a work which, he says, is sought eagerly for in every part of Europe, and which has induced so many distinguished foreign naturalists to visit us, and will bring many more. The visits of such men do more to render our country and its resources appreciated abroad, than hundreds of those travellers who come here to kill time and to gossip, and we shall soon see and feel the results, in the softening of those prejudices which have been engendered and kept up abroad against America and Americans. For Prof. Agassis, a pupil of the great Cuvier, a name reverenced among naturalists, we bespeak the most cordial reception among our friends, and which we know will be as freely accorded to the man as to the philosopher.

YIELD OF WHEAT IN ENGLAND.—The average yield of wheat in Britain, is put down in statistical works at 26 bushels per acre, the yield having increased, within a few years, 8 bushels per acre. Mr. COLMAN states that in his intercourse with the British farmers, he has seldom found the yield, under good cultivation, less than 32 bushels, and that he has frequently found it full 40 bushels. He states, further, that he is informed, on the best authority, on the redeemed lands ("fens,") of Lincolnshire, the yield is very often from 56 to 64 bushels per acre. One farmer in Berkshire assured Mr. C. that his crop on a large farm averaged 56 bushels to the acre; and he adds that it has been well attested that a crop in Norfolk, the same year, produced 90 bushels and three pecks per acre—"the largest yield," says Mr. C., "within my knowledge."

SEED-CORN.—We have received from Mr. ELI ROOT, of Orwell, Vt., a bushel of Indian corn of a variety cultivated by him, and in reference to which he says—"I send you a box of seed-corn of a kind my father brought from Pittsfield, Mass., *fifty-six* years ago last March, and which has ever since been planted on my farm. You see it is not quite *run out* yet, though it has not been improved by *crossing.*" The corn is certainly a handsome sample—the ears long, (8 rowed,) well filled over the cob, and the kernels large, plump, and bright. We see but one objection to it, and [illegible] attention in selecting seed would in a few years greatly remedy that. The *butts* of the ears are too large—holding so much sap or moisture, as to prevent the ear and grain from readily drying. It is of much importance that the crop should be in condition to be stored at the earliest possible period; as a difference of a few days in this respect may greatly affect the value of the crop. The smaller the cob and butt, the quicker the corn will become dry and fit to put in the crib.

BROWSE FOR CATTLE.—Mr. CLARK RICH, of Shoreham, Vt., informs us that cattle and sheep can be kept well on browse alone. We have no doubt of the fact, as we have known instances where it has been done. Mr. R. states that last spring, (1846,) the farmers in portions of Pennsylvania and Ohio, near lake Erie, were compelled to take their stock to the woods daily, in order to support them through the winter. It was extremely dry there the previous season, so that the hay crop almost entirely failed, making it necessary to depend on browse for fodder. Yet Mr. R. says he heard many say their cattle never came out better in the spring.

CORRECTION.—By some unaccountable mistake, in the list of pears on p. 336, last No., the name *Julienne* was printed "Indiana."

"C. P. WHEELER."—We shall be glad if any of our subscribers can inform us of the whereabouts of this man, who formerly acted as agent for "The Cultivator," at Lexington, Mass., and forgot to pay for the papers he ordered.

THE STRAWBERRY CONTROVERSY.

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[Although the question in regard to the sexual character of the strawberry has been considerably discussed, we think the following very able article, written by the Rev. H. W. BEECHER, for the Western *Farmer and Gardener*, will be read with interest, and will be regarded as placing the subject for the future beyond controversy.]

No man will deny, that in their cultivated state, strawberries are found, in respect to their blossoms, in three conditions: first, blossoms with stamens alone, the pistillate organs being mere rudiments; second, blossoms with pistillate organs developed fully, but the stamens very imperfect and inefficient; third, blossoms in which staminate and pistillate organs are both about equally developed.

There are two questions arising on this state of facts, one, a question of mere vegetable physiology, viz; is such a state of organization peculiar to this plant originally, or is it induced by cultivation? The other question is one of eminent practical importance, viz: what effect has this state or organization upon the success of cultivation?

Passing by the first question, for the present, we would say of the second that, a *substantial* agreement has, at length, been obtained. It is on all hands conceded that staminate plants, or those possessing only stamens, and not pistillate organs, are unfruitful. Any other opinion would now be regarded as an absurdity. It is equally well understood that pistillate plants, or those in which the female organs are fully, and the male organs scarcely at all developed, are unfruitful. No one would attempt to breed a herd of cattle from males *exclusively*, or from *females;* and, for precisely the same reason, strawberries cannot be had from plants substantially male, or substantially female, where each are kept to themselves.

But a difference yet exists among cultivators as to the facts respecting those blossoms which contain *both* male and female organs, or, as they are called, *perfect* flowering plants.

Mr. Longworth states, if we understand him, substantially, that perfect flowering varieties will bear but moderate crops, and, usually, of small fruit.

On the other hand, Dr. Brinkle, whose seedling strawberries we noticed in our last number, Mr. Downing, and several other eminent cultivators, adopt the contrary opinion, that, *with care,* large crops of large fruit may be obtained from perfectly flowering plants. The question is yet, then, to be settled.

It is ardently to be hoped that, hereafter, we shall have less premature and positive assertion, upon unripe observations, than has characterized the early stages of this controversy. We will take the liberty of following Mr. Hovey in his Magazine, between the years 1842 and 1846, not for any pleasure that we have in the singular vicissitudes of opinion chronicled there, but because an eminent cultivator, writer, and editor of, hitherto, the only horticultural magazine in our country, has such influence and authority in forming the morals and customs of the kingdom of horticulture, that every free subject of this beautiful realm is interested to have its chief men of such accuracy that it will not be dangerous to take their statements.

In 1842, Mr. Longworth communicated an article on the fertile and sterile characters of several varieties of strawberries for Mr. Hovey's Magazine, which Mr. H., for subject matter, endorsed. In the November number, Mr. Coit substantially advocated the sentiments of Mr. L., and the editor, remarking upon Mr. Coit's article, recognized distinctly the existence of male and female plants.

He (Mr. H.) says that of four kinds mentioned by Mr. C. as unfruitful, two were so "*from the want of staminate or male plants;*" and "the cause of the barrenness *is thus easily explained.*" And he goes on to explain divers cases upon this hypothesis; and still more resolutely he says, that all wild strawberries have not perfect flowers; "in a dozen or two plants which we examined last spring, *some were perfect,* (the italics are ours,) having both stamens and pistils; *others, only pistils,* and *others, only stamens;* thus showing that the *defect mentioned by Mr. Longworth exists in the original species.*" He closes by urging cultivators to set rows of Early Virginia among the beds for the sake of impregnating the rest.

Mr. Hovey's next formal notice was exactly one year from the foregoing, November, 1843, and it appears thus: "We believe it is now the generally received opinion *of all intelligent cultivators* (italics are ours again,) that there is *no necessity of making any distinction in regard to the sexual character of the plants when forming new beds. The idea of male and female plants,* first originated, we believe, by Mr. Longworth, of Ohio, is now considered *as exploded.*" Such a sudden change as this was brought about, he says, by additional information received during that year by means of his correspondents, and by more experience on his own part. He says nothing of male blossoms and female blossoms, *which he had himself seen in wild strawberries.* Mr. Hovey then assumed the theory that *cultivation,* good or bad, is the cause of fertile or unfertile beds of strawberries, and he says: "in conclusion, we think we may safely aver, that there is not the least necessity of cultivating *any one strawberry near another* (our italics) to ensure the fertility of the plants, *provided* they are under a proper state of cultivation."

Mr. Hovey now instituted experiments, which he promised to publish, by which to bring the matter to the only true test; and he, from time to time, repromised to give the result to the public, which, thus far, we believe, he has forgotten to do.

His magazine for 1844 opens as that of 1843 closed; and in the first number he says: "the oftener our attention is called to this subject, the more we feel confirmed in the opinion that the theory of Mr. Longworth is entirely unfounded; that there is *no such thing as male and female plants,* though certain causes may produce, as we know they have, fertile and sterile ones."

Nevertheless, in the next issue but one, this peremptory language is again softened down, and a doubt even appears, when he says, "IF *Mr. Longworth's theory should prove true, &c.*" We, among others, waited anxiously for the promised experiments; but, if published, we never saw them. The subject rather died out of his Magazine until August, 1845, when, in speaking of the Boston Pine, a second fine seedling of his own raising, he is seen bearing away on the other tack, if not with *all* sails set, yet with enough to give the ship headway in the right direction: "Let the causes be what they may, it is sufficient for all practical purposes to know, that *the most abundant crops* (italics ours) can be produced by planting some sort abounding in *staminate* flowers, in the near vicinity of those which do not possess them;" p. 293. And on p. 444 he reiterates the advice to plant near the staminate varieties. In the August number for 1846, p. 309, Mr. Hovey shows himself a thorough convert to Mr. Longworth's views, by endorsing, in the main, the report of the committee of the Cincinnati Horticultural Society. We hope after so various a voyage touching at so may points, that he will now abide steadfast in the truth.

We look upon this as a very grave matter; not because the strawberry question is of such paramount, although it is of no inconsiderable importance; but it is of importance whether accredited scientific magazines should be trustworthy; whether writers or popular editors should be responsible for mistakes entirely unnecessary. We blame no man for vascillation while yet in the process of investigation, nor for coming at the truth gradually, since this is the necessity of our condition to learn only by degrees, and by painful shiftings The first requisite for a writer is, that he be worthy of trust in his statements. No man can be trusted who ventures opinions upon uninvestigated matters; who states facts with assurance which he has not really ascertained, who evinces rashnesss, haste, carelessness, credulity, or fickleness in his judgments. The question of perfect or imperfect blossoms depends upon the simplest exercise of eye-sight. It requires no measurements, no process of the laboratory, no minute dissections or nice calculations, it requires only that a man should *see* what he *looks* at.

When a boy, playing "how many fingers do I hold up," by dint of peeping from under the bandage, we managed to make very clever guesses of how many lilly fingers some roguish lassie was holding in tempting show before our bandaged eyes, but some folks are not half so lucky with both eyes wide open, and the stamens and pistils standing before them.

If such latitude is permitted to those who conduct the investigations peculiar to horticulture, who can confide in the publication of facts, observations, or experiments? Of what use will be journals and magazines? They become like chronometers that will not keep time; like a compass that has lost its magnetic sensibility; like a guide who has lost his own way, and leads his followers through brake, and morass, and thicket, into interminable wanderings. Sometimes, the consciousness of faults in ourselves, which should make us lenient towards others, only serves to produce irritable fault-finding. After a comparison of opinions and facts, through a space of five years, with the most distinguished cultivators, east and west, Mr. Longworth is now universally admitted to have sustained himself in all the essential points which he first promulgated—not *discovered*, for he made no claim of that sort. The gardeners and the magazines of the east have, at length, adopted his practical views, after having stoutly, many of them, contested them.

It was, therefore, with unfeigned surprise, that we read Mr. Hovey's latest remarks in the September number of his magazine, in which, with some asperity, he roundly charges Mr. Longworth with manifold errors, and treats him with a contempt which would lead one ignorant of the controversy, to suppose that Mr. Hovey had never made a mistake, and that Mr. Longworth had been particularly fertile of them. Thus: "Mr. Longworth's remarks abound in so many errors and inconsistencies, that we shall scarcely expect to notice all. "Another *gross assertion*," &c. Referring to another topic, he says: "This question, we therefore, consider as satisfactorily settled, without discussing Mr. Longworth's conflicting views about male and female Keen."

This somewhat tragical comedy, is now nearly played out, and [illegible] just before the [illegible] the curtain, because, as chroniclers of events, and critics of horticultural literature and learning, it seemed no less than our duty. We have highly appreciated Mr. Hovey's various exertions for the promotion of the art and science of horticulture, nor will his manifest errors and short comings in this particular instance, disincline us to receive from his pen whatever is good.

We hope that our remarks will not be construed as a defence of western men or western theories, but as a defence of the truth, and of one who has truly expounded it, though in this case, the theory and its defender happen to be of western origin. Whatever errors have crept into Mr. Longworth's remarks should be faithfully expurgated; and perhaps it may be Mr. Hovey's duty to perform the lustration. If so, courtesy would seem to require that it should be done with some consciousness that through this whole controversy, Mr. Longworth is now admitted to have been right in all essential matters; and if in error at all, only in minor particulars; while Mr. Hovey, in all the controversy in respect to the plainest facts, has been changing from wrong to right, from right to wrong, and from wrong back to right again. We do not think that the admirable benefits which Mr. Longworth has conferred upon the whole community, by urging the improved method of cultivating the strawberry, has been adequately appreciated. We still less like to see gratitude expressed in the shape of snarling gibes and petty cavils.

We will close these remarks by the correction of a matter which Mr. Downing states. While he assents to all the *practical* aspects of Mr. Longworth's views, he dissents to some matters of fact and philosophy, and among others to the fact that Hovey's seedling is *always* and *only* a pistillate plant. He thinks that originally it had *perfect* flowers, but that after bearing twice or thrice on the same roots, the plants degenerate and become either pistillate or staminate. He says: "Hovey's seedling strawberry, at first, was a perfect sort in its flower, but at this moment, more than half the plants in this country have become pistillate.

Mr. Hovey himself states the contrary on p. 112 of his Magazine for 1844. He denies that there are two kinds of blossoms to his seedling, and says, "the flowers are all of one kind, with both pistils and stamens, *but the latter quite short and hidden under the receptacle.*" This is the common form of all the *pistillate* blossoms, and shows in so far as Mr. Hovey's observations are to be trusted, that at its starting point and home, Hovey's Seedling was, as with us it now invariably is, so far as we have ever seen it, a pistillate plant.

PRICES OF AGRICULTURAL PRODUCTS.

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New-York, Nov. 20, 1846.

COTTON—New Orleans and Alabama per lb., 8¾a11½c.—Florida, 8½a10—Upland, 6½a10½ cts.

BUTTER—Orange County, per lb, 16a18c.—Western dairy, 13a15c.

CHEESE—Per lb., 7a8c.

FLOUR—Genesee, per bbl, $5.50—Ohio and Michigan, $5.37½ a$5.40. [The late foreign news has depressed prices full 50 cts. per bbl.

GRAIN—Wheat, per bushel, $1.05a$1.07 for Red,—$1.16a $1 17 for Genesee. Corn, 73a73½cts. Rye, 76a78 c.—Oats. 36a 37c.

HEMP—Russia, clean, per ton, $210—Manilla, $150.

HAMS—Smoked, per lb., 6½a9 cts.

BEEF—Mess, per bbl., $7a$8.25.

LARD—Per lb. 7½a8c.

PORK—Mess, per bbl., $9.87—Prime, $8a$8.12½.

HOPS—Per lb., 9a10c.

TOBACCO—Connecticut, per lb., 10a11c—Kentucky, 4c.

WOOL—(Boston prices.) Nov. 18:

Prime or Saxon fleeces, washed per lb.	38a40 cts.
American full blood fleeces, ...	32a33 "
" three-fourths blood fleeces, ...	25a28 "
" half blood do	23a25 "
" one-fourth blood and common, ...	20a22 "

GUANO.—200 tons, the balance of the ship Shakspeare's cargo from Ichaboe, in tight casks, for sale in lots to suit purchasers, by E. K. COLLINS & Co., 56 South-st.

The many experiments made this season from this cargo, not only prove the great gain in using it, but that it is at least equal if not superior to any other guano.

[illegible] 1846 [illegible]

DOWNING'S WORKS.

VALUABLE WORKS, by A. J. Downing, Esq *The Fruits and Fruit Trees of America.* or the Culture, Propagation, and management of the Gardens and Orchards of Fruit Trees generally; with descriptions of all the finest varieties of fruit cultivated in the country.

1 thick vol. 12 mo., with many engravings. $1.50. Or a superior edition in large 8 vo., to match the author's other works. $2.50.

"This is the most valuable of all the books which Mr. Downing has contributed to the higher departments of our rural literature, and it is the most charming book of the season. Some idea may be formed of its completeness from the fact of its containing a list of no less than 490 sorts of apples Mr. Downing claims the right to talk about fruits and trees from having been born in 'one of the largest gardens, and upon the banks of one of the noblest rivers in America;' everybody will concede the right since he has shown himself so competent to the task."—*Broadway Journal.*

"This is a valuable practical work, and every orchardist and every fruit-grower should possess himself of its stores of information."—*U. S. Gazette.*

A Treatise on Landscape Gardening; adapted to North America, with a view to the improvement of country residences. Comprising historical notices, and general principles of the art; directions for laying out grounds, and arranging plantations; descriptions and cultivation of hardy trees; decorative accompaniments to the house and grounds; formation of pieces of artificial water, flower gardens, etc.: with remarks on Rural Architecture. New edition, with large additions and improvements, and many new and beautiful illustrations. 1 large vol. 8vo. $3 50.

"This volume, the first American treatise on this subject, will at once take the rank of THE standard work."—*Silliman's Jour.*

"Downing's Landscape Gardening is a masterly work of its kind.—more especially considering that the art is yet in its infancy in America."—*Loudon's Gardener's Magazine.*

Designs for Cottage Residences; adapted to North America, including Elevations and Plans of the Buildings, and designs for laying out Grounds. 1 vol. 8vo., with very neat illustrations. Second edition, revised. $2.00.

A second edition of the "Cottage Residences" is just published, as Part I.; and it is announced by the author that Part II., which is in preparation, will contain hints and designs for the interiors and furniture of cottages, as well as additional designs for farm buildings.

Gardening for Ladies; and Companion to the Flower Garden. Being an alphabetical arrangement of all the ornamental plants usually grown in gardens and shrubberies; with full directions for their culture. By Mrs. Loudon. First American, from the second London edition. Revised and edited by A. J. Downing. 1 thick vol. 12 mo., with engravings representing the processes of grafting, budding, layering, &c., &c. $1.25.

"A truly charming work, written with simplicity and clearness. It is decidedly the best work on the subject, and we strongly recommend it it to all our fair countrywomen, as a work they ought not to be without."—*N. Y. Courier.*

"This is a full and complete manual of instruction upon the subject of which it treats. Being intended for those who have little or no previous knowledge of gardening, it presents in a precise and detailed manner, all that is necessary to be known upon it, and cannot fail to awaken a more general taste for these healthful and pleasant pursuits among the ladies of our country.—*N. Y. Tribune.*

Published and for sale by WILEY & PUTNAM,
Oct. 19.—3t No. 161 Broadway, N. Y.

Messrs. W. & P. will publish shortly, *Wightwick's Hints to Young Architects.* Edited with additions, by A. J. Downing.

Also, a new edition of Lindley's Horticulture, edited by A. J. Downing, and Prof. A. Gray.

HOVEY'S PATENT SPIRAL STRAW-CUTTER.

THESE machines are thought to excel all others for cutting hay, straw, or corn-stalks. The knives being supported by wings cast on the cylinder, are rendered sufficiently strong to cut the largest corn-stalks with great ease and dispatch, and as the knives are regulated by set-screws, it gives them a great advantage over all other cylinder cutters. There are other cylinder cutters the knives of which are fastened with rings at the end without wings to support them, and on such cutters the knives are wholly unadjustable, except with keys or wedges, the use of which is thought to be an infringement on the rights of Mr Hovey. The prices of these machines are, for No. 1. $10; No. 2. $12; No. 3. $15; No. 4, $20. For sale at the ALBANY AG. WAREHOUSE, 23 Dean-st., and 10 Maiden Lane.

IMPORTED THOROUGH BRED SHORT-HORN BULL, YOUNG FORESTER.

WM. ATKINSON offers the above named bull for sale, and any gentleman wishing to improve his breed of stock, will find this a most seasonable opportunity of doing so, as Young Forester possesses in an extraordinary degree the splendid qualities for which the Short Horns are so justly celebrated.

He is four years old, his color is a rich roan, his symmetry is perfect, his pedigree unrivalled, and he was bred by one of the most famous breeders in the north of England. It is also worthy of remark, that at the several shows in the province of Canada at which he has been exhibited, he has invariably taken the first premium of his class.

Letters (pre-paid,) addressed to WM. ATKINSON. Guelph, Canada West. will meet with immediate attention.

Oct. 1—3t.

NEW-ENGLAND AGRICULTURAL WAREHOUSE AND SEED STORE.

Nos. 51 and 52 North Market-Street, Boston.

FOR sale at this establishment, a general assortment of Agricultural and Garden Implements—Howard's Improved Patent Cast Iron Plows of all sizes. Martin's improved Eagle and other Plows; Double Mould Board, Side-Hill, Paring, and other plows, in great variety, and of the most approved patterns. Howard's Subsoil Plows, Cultivators of different descriptions; Willis' Seed Sower, (the best in use;) Geddes' and other Harrows of various patterns; Green's Straw-Cutters, Willis' Straw-Cutters, of various kinds and prices; Gault's Patent Churns, Grindstones or Friction Rollers; Cast Iron Field Rollers, (a very superior and substantial article;) Garden Rollers of cast-iron, different sizes; Iron Rakes of every size and variety; Garden Trowels, Syringes, in great variety; Pruning and Budding Knives; Pruning Scissors and Shears in great variety; Grass Hooks and Garden Shears; Garden and Field Hoes of every pattern; Scufflers every size; Pick Axes, Shovels, Spades, Dung and Garden Forks of every description; Hay Tools, including the very best Scythes manufactured in the country, (in all cases warranted;) Hall's and other Hay Rakes, Pitch-forks, Grain Cradles, Horse Rakes, Sickles, Austin's Rifles, Whet Stones, &c., &c.

Also a complete assortment of Chains, viz:—Fence Chains—Trace do —Ox do.—Dog do.—Tie-up do. Hale's Horse Power; Hale's Threshing Machine and Winnowing Mills, Garden Engines, &c.

Also Axes, Hatchets, Bill Hooks, Hammers; Axe, Hoe, and Rake Handles; Ox Yokes. Bull Rings; together with every other article important for Agricultural or Horticultural purposes

Harris' Paint Mill, the best in use, is also for sale at this establishment.

SEEDS, TREES, AND PLANTS.

The subscribers are enabled to furnish seeds of the purest quality, of every variety of field, vegetable, and flower seed; embracing every variety desirable far cultivation.

Also, Fruit, Forest, and Ornamental Trees and Shrubs, of every description.

Also Hardy Herbaceous Plants; Roses, embracing 500 of the best varieties; Bulbous Roots in great variety. Green-House Plants, Grape Vines, &c.

☞ Orders promptly attended to. JOSEPH BRECK & Co.
Boston, Sept. 1—tf.

A GOOD FARM IN AUBURN FOR SALE.

THE subscriber offers for sale the farm on which he now resides, in the village of Auburn, Cayuga county, consisting of 152 acres of good grain and grazing land, well enclosed and watered, and upon which are one large, and three moderate sized DWELLING HOUSES, Carriage Houses, Barns, Sheds, and other necessary out-buildings, three Apple Orchards, a great variety of choice Fruit Trees and Shrubbery, four durable Springs, three wells, two hundred rods of full stone fence, and an inexhaustible QUARRY of a superior quality of grey and blue lime stone, suitable for cutting and dressing, eligible and convenient for a continued sale of that article, either rough or hewn, according to the demand, and from which most of the elegant stone buildings in Auburn were erected.

This farm extends from North-street to and across State-street, with a front of eighty-six rods on the former and one hundred and sixteen rods on both sides of the latter—upon either of which may be advantageously sold a great number of village lots, at the pleasure of the owner. About 22 acres, including the large house, barns, sheds, two orchards and garden, lie between North-street and the Auburn and Syracuse Railroad: 65 acres, including the stone quarry and one dwelling house, lie between said Railroad and State-street, and the remaining 65 acres, with two dwelling houses, lie west of State-street—all which is in a high state of cultivation, well fenced, conveniently allotted, and in good order. The whole farm, or either of the above parcels, will be sold cheap, and if desired, time will be given for the payment of a large proportion of the purchase money.

Inquire of Luther Tucker, of Albany, Hulbert & Hall, of Auburn, or the subscriber upon the premises. GEO. B. CHASE.
Auburn, Sept. 1, 1846—4t.

TO WOOL-GROWERS.

THE subscribers have a tract of land lying in Patrick Co., Va., consisting of about *ten thousand acres*, which they wish to sell or rent. It has on it immense quantities of the largest timber, with abundance of water, and water power. A portion of the land has been cleared, and produces the finest grass in the world. We would like to dispose of it, or to enter into partnership with any gentleman who would furnish a flock of sheep, and go into the business of growing wool. Apply by letter to either of the subscribers, at Cumberland Court House, Va., or in person to Col. A. Staples, Patrick Co., Va., who will show the land.

WILLIAM W. WILSON
Sept. 1—6t. WILLIS WILSON.

ALBANY AG. WAREHOUSE.

DISSOLUTION.—The co-partnership heretofore existing between the subscribers, under the firm of E. COMSTOCK & Co., is this day by mutual consent dissolved. The affairs of the late firm will be settled, and the business continued by LUTHER TUCKER.

Albany, Sept. 9, 1844. ELON COMSTOCK.
LUTHER TUCKER

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WILD TURKEYS.

FOR sale, two pair of wild turkeys—one pair of which were sent from Illinois in the fall of 1844, and the others were reared from them the present year. They are well domesticated, and are splendid birds. Price, $10 per pair. Inquire at the Office of the Cultivator.

Dec. 1—2t.

"SANFORD'S PATENT STRAW CUTTERS."

THE subscriber has just received a quantity of these superior machines, made in a superior manner. A few also for Cutting Stalks.

JAS. PLANT. Sole Agent,
No. 5 Burling Slip, N. Y. City.
Dec. 1—2t.

NOTICE.

THE undersigned expects to return from his journeyings in the southern states about the 1st February next, when he hopes to be fully prepared to meet and fill all orders in his line, particularly for his "Warren Horse Powers and Threshers," now so much and perfectly improved, his "Hand Threshers," and the "Trimble Horse Powers," and the Endless Chain Horse Powers—also for the "Platt's Improved Portable Burr Stone Mills,"—together with Ploughs, Castings, Corn-Shellers, &c., &c In the mean time, however, all orders will be promptly attended to, as usual.

JAS. PLANT, 5 Burling slip, N. Y. City.
Nov. 1—3t.

ALBANY AGRICULTURAL WAREHOUSE AND SEED STORE.

THE subscriber having become the proprietor of the above establishment, has removed it from Dean-st., to the large and central store No. 10 Green-st., (four doors south of State-st.,) where he will keep constantly on hand every variety of Farm and Garden Implements, and Field and Garden seeds, which will be sold on as favorable terms as they can be procured at any place in the Union. Among the implements will be fouud of the different sizes,

Ruggles, Nourse & Mason's Worcester Plows;
Prouty & Co.'s Centre Draft and other Plows;
Hovey's Patent Spiral Straw Cutters, all sizes;
Burrell's Corn Shellers, the best in use;
Grant's Celebrated Fanning Mills;
Geddes' Improved Harrows;
Cultivators, of different patterns.
Lewis' Seed Planter, Shovels, Spades, Hay Knives, Hay and [illegible] Forks, Cattle Chains, Bull Rings, &c., &c.

[illegible] LUTHER TUCKER.

FARM FOR SALE.

A GOOD farm of eighty-two acres, situated in the town of New Haven, (Oswego Co.) twelve miles east of Oswego village Said farm is well adapted to grain and the different grasses. It is pleasantly located, well watered, and buildings in good repair, with plenty of excellent fruit. It is within three miles of the village of Mexico, which affords facilities for manufacturing, the various mechanic arts, &c., &c.

For further particulars inquire of the subscriber, living on the premises, or of Dr. B. E. Bowen, of Mexico.

ALPHEUS HERBERT.
New-Haven, Sept. 1, 1846.—1t*

PATENT PREMIUM FAN-MILLS.

I. T. GRANT & Co., still continue to manufacture the celebrated Improved Patent Fan-Mills, at the old stand, Junction, Rens. Co., N. Y. These mills have taken the *first premium* at the following places:—New-York State Fair, at the Institute, New-York, the State Fair, at Pennsylvania, and the State Fair at Maryland. The subscribers have no hesitation in saying that these mills surpass anything of the kind ever offered in market. They are the only mill that has ever been produced that will chaff and screen wheat perfectly clean in one operation.

We also manufacture *Grain Cradles* of the very best quality, which have taken the first premium at the New-York State Fair They are for sale at factory prices, at the following places:—

A. B. Allen's, 187 Water-st., New-York;
John Magher & Co., 195 Front-st., New-York.
Luther Tucker's Ag. Warehouse, Albany;
H. Warren's, Troy; and
Viall & Warren's, Mechanicsville, Saratoga Co., N. Y.
Denslow & Webster's, Savannah. Geo.

All orders thankfully received and punctually attended to. All goods delivered at Troy, N. Y., free of charge.

I. T. GRANT, &Co., Junction P. O., Rens. Co., N. Y.
Feb. 1—tf [2]

AGRICULTURAL WAREHOUSE.
183 *Front-st., New-York.*

THE subscriber offers for sale an extensive assortment of Farming and Gardening utensils, consisting in part of plows of Freeborn's, Minor's, Horten & Co.'s, Prouty & Mears', and Ruggles, Nourse & Mason's patterns. The Locked Coulter, and Wrought Share Plow.

Corn Shellers, Fanning Mills, Grain Cradles, Corn and Cob Mills, Straw Cutters, of Greene's, Hovey's, Eastman's, and other most approved patterns.

Horse Powers, Threshing Machines, &c. Gin gear, Mill, Horse-power, and all other castings, constantly on hand. Also a general assortment of Brass, Copper, and Iron Wire Cloth, for Paper, Rice, and other mills. Seives, Screens, Riddles, &c., &c.

Persons ordering articles from the subscriber may depend upon having them made of the best materials and in the most workmanlike manner.

JOHN MOORE.
New-York, Oct. 1, 1846

KENDALL'S CYLINDER CHURNS.

THE following in relation to the above churns, from a firm in Vermont, who purchase of us, will show in what estimation the cylinder churns are held.

"We wrote you a few days since, to forward three each of the two smallest size churns. Please send us immediately six each of three sizes. Churns are getting in good demand. Our people think there is quite a saving when they can fetch the butter in two minutes, instead of churning two hours with the old fashioned churn. The Kendall churn is getting to be all the go."

The above churns are always for sale at wholesale or retail, at the Albany Agricultural Warehouse. No. 10 Maiden Lane, and 23 Dean-st. LUTHER TUCKER.

WIRE CLOTH SEIVE AND SCREEN MANUFACTORY.

THE subscriber has constantly on hand a large assortment of the above articles, which he offers at the lowest market prices.

D. L. CLAWSON.
July, 1846—10 mos. 191 Water-st, New-York.
P. S.—All kinds of wire work manufactured to order.

FINE WOOLED BUCKS.

THE subscriber has had left in his charge, several bucks which are a cross between the Saxon and Merino varieties. They are two years old, of good size and form, and their wool, both in quantity and quality, would be found satisfactory. Further information given on inquiry. SANFORD HOWARD.
Cultivator Office, Albany, Sept. 1, 1846.

FARM WANTED.

A GENTLEMAN is desirous of purchasing a farm, capable of being occupied strictly as a STOCK FARM, sufficiently near some railroad communicating with the Erie Railroad to facilitate the transportation of stock to market. It is wished that the farm should be situated in a healthful district, with pleasing scenery, and in the immediate vicinity of water, and having a house capable of accommodating a gentleman's family. The soil, and all the appurtenances of the farm, should be such as would yield the owner a good return for his investment. Applications, paid) may be addressed to Box 2031 New-York Post-Office.
Oct. 1—[illegible]

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